FLYING SPORTSMAN and SKYWAYS

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JULY, 1947 25¢

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GIVEN AWAY

Page 54

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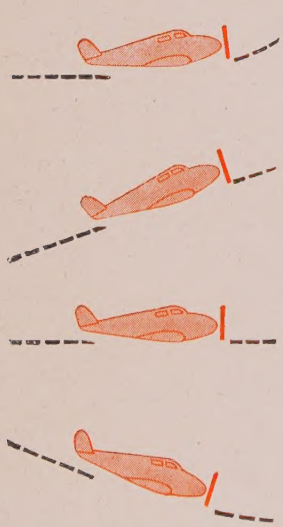

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Aero matic

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Powered by a thrifty 100-horsepower engine, the new Piper Cub Super Cruiser will take you cross-country at a top speed of 115 miles per hour. The Super Cruiser has a non-stop cruising range of over 600 miles . . . in fact, 700 miles at the economy cruising speed. Auto-type, spring-filled seats make every flight a comfortable one. An electric starter and a two-way, two-band radio that gives both airways and regular broadcast reception are included as standard equipment on the Super Cruiser. Yet it is lower in price than any similar plane!

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LOOK TO THE LEADER FOR GOOD SAFE PLANES
YOU CAN AFFORD TO BUY AND FLY

PIPER

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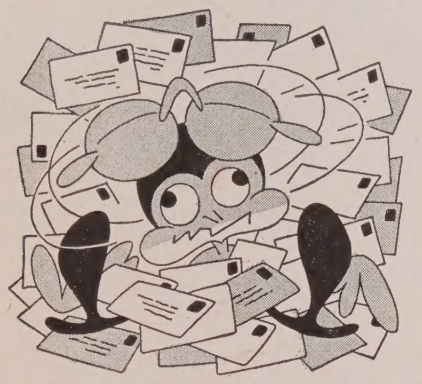
The Birdmen's Perch

By *Major Al Williams*, ALIAS, "TATTERED WING TIPS,"
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.



We have kicked up a hornet's nest!

We have stirred a beehive. We have swung a prop with the throttle wide open. We have made more trouble than an ape in a banana factory.

We said, somewhat hesitantly mind you, that we thought a chap named Dornbusch was probably the oldest pilot in the U.S.

117,000 shrieking, indignant letters now lead us to ponder this belief.

There's a pilot in Delta, Colo., it seems, who goes whisking over the Rockies as though they were the foothills of Philadelphia!

He has his own airplane, 700 hours, and soloed in 1940.

He is 80 years old!

As soon as we get in touch with him, we're going to tell you more about this magnificent character.

JUICY ITEM

Look what you've got now: An aircraft battery with a full 24 amp. hour capacity.

But the catch on this one is that they shaved it down to 21½ lbs. . . . to 7¾" x 5¼" x 7⅞"!

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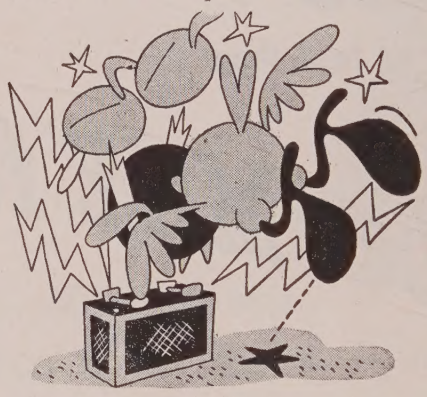
Because—as you ought to know by now (if you're a loyal Perch pilot)—after Gulfpride is refined an additional refining step is added.

This extra step, the Alchor Process, gets dead weight carbon and sludge formers out of Gulfpride Oil.



We lose a lot of oil this way, *but you gain a lot of lubrication* when you use Gulfpride.

LITTLE KNOWN FACTS DEPT.

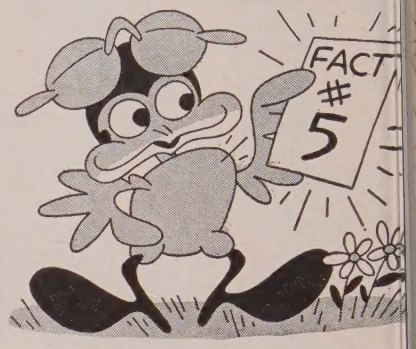
Guess what?

(Appropriate sounds of great commotion, noise, festivities and screams of joy.)

WE GOT A SENIOR PERCH PILOT!

Charles Miller, of Sacramento, Cal., bless his aviation-saturated heart, has sent us *five* little known facts about well known planes, good enough to use in the Perch.

What's more, he sent proof every time!



As you know, a "Fact" good enoug to print and accompanied with proof ge you the exalted commission of Perc Pilot (bottom rung).

And we promised that five of ther would get a promotion to Senior Perc Pilot.

Miller is first with the following:

"Designing and building one whee for the B-19 costs as much as the pric of twenty popular light planes!"

There's only one promotion left fo Miller . . . he can become a Comman Perch pilot when he's had twenty of hi "Facts" accepted.

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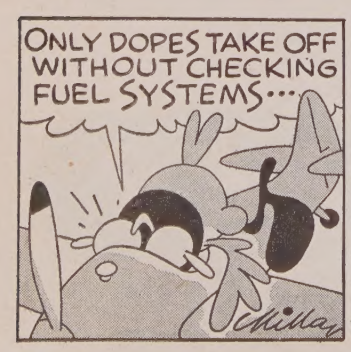

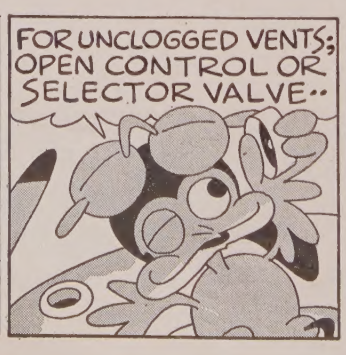

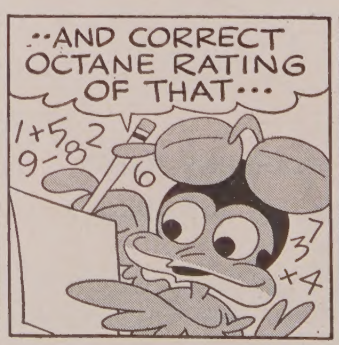

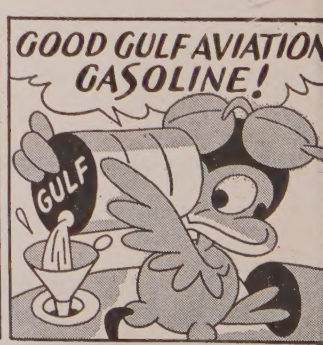

FLYING SPORTSMAN and
SKYWAYS
Incorporating Air News

Cover: Piper Skysedan

Flying Sportsman News 12
News notes from the sports' corners of the States

Forestry Air Force . . . . . A. A. Hoehling 18
The Government's own air force to protect wildlife and forests

Beginner Beware 21
Look before you leap is the lesson taught

Keep It Like New . . . . . C. B. Colby 22
For that "best-kept plane" look, follow these tips

Magic in the Sky . . . . . Douglas J. Ingells 24
This magician can't keep his feet on the ground

Wings North . . . . . Perc Angwin 26
The flying angle for the northern angler

Handy Dandy . . . . . Tamara Andreeva 29
Presenting a handy gadget for reading traffic regulations

Canine Canyon Duster . . . . . Hade Colter 30
In which a wire-haired terrier bids for co-pilot job

A Pilot's Report . . . Vultee BT-13 . . . . . Bob Arentz 32
This military instrument ship makes good civilian trainer

Weekend Sportsmen . . . . . Adele Hoskins 36
Well-known radio stars fly their own planes for weekend fun

Getting Along in Traffic . . . . . Gene Landman 38
In which a traffic pattern and its procedures are defined

Aero Lineman 41
Inspecting high tension lines is easier from an airplane

Movieland Airport . . . . . Audrey Davenport 42
Why Santa Monicans flock to their Clover Field

Dilbert . . . . . Robert Osborn & Seth Warner 44
To learn to fly, learn to stall too; but fly, don't stall

New on the Wing 60
These are the newest airplanes along the skyways

Air Your Views 6
Editorial 8
Prop Wash 10
Where to Fly 14
Hangar Flying 16
Washington News 62
Book Mart 65
Military Aviation 70

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There are two Skyways: English and Spanish

JULY 1947 VOLUME 6, NUMBER 7

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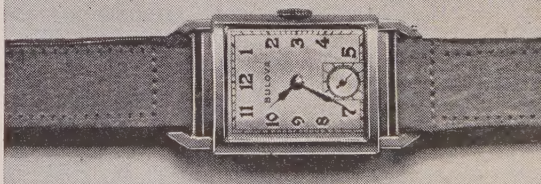

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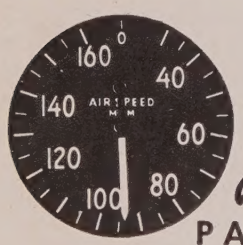

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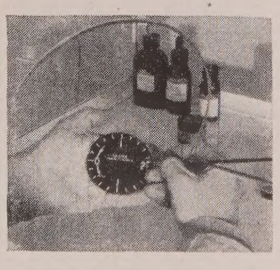

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AIR YOUR VIEWS

Salaries for Mechs

Gentlemen:

For quite some time I have been anticipating acquiring my A & E ticket, getting out of the factory and onto the field where they speak my language. But it appears to me that the poor A & E mechanic and apprentice is sadly underpaid at most airports, and I am wondering whether anything will ever be done about it.

I was always under the impression that an airplane mechanic is or should be classed as a skilled workman. Before even taking the written examinations, he must have had from one to two years' experience. After submitting letters, character references, etc., to the local inspector he is allowed to take the written. Then he is required to demonstrate his skill in the presence of another inspector in order to get through his practical. Then why, after all this preparation, is the airplane mechanic, certificated by the government, paid less than the automobile mech?

CHESTER WOLFF

Chicago, Illinois

We checked with CAA, and found the average A & E mechanic's salary ranging from $2,694 to $2,894, and the general mech making around $2,469. We checked further, and found auto mechanics' wages ranging all the way from $2,300 to $3,600. It may be some consolation to you to know that there is a movement afoot now to require auto mechanics to be licensed. If and when this happens, it is conceivable that it may have the effect of equalizing wages for mechanics in the two industries.—ED.

•

Do It Yourself

Dear Editor:

I recently saw a picture of the *Dart* plane. Do they still make this plane, and if so, who manufactures it? And what is the selling price?

THOMAS E. SOUSA

Oakland, California

The Dart *is now being offered in CAA-approved kit form, for assembly by the buyer under supervision of an A & E mechanic. It is made by Dart Aircraft Corp., Division of Muller Industries, Quincy, Michigan. The kit includes a 100 hp Continental and sells for $2,375.*—ED.

•

'Copters for Pests

Gentlemen:

On page 62 of your February issue, you picture a helicopter used in pest control work, under the caption "Britain's New Crop Duster." We think the correct designation should be "crop sprayer." Many people in the crop dusting and spraying business think that helicopters have a very promising future in this field.

JOHN I. BARNES

Clayton, N. C.

That machine was spraying, as you say. But spraying or dusting, we, too, believe they have a great future.—ED.

Skysedan Performance

Dear Sir:

In "Buy a Useful Plane" in the April is you say that the Piper *Skysedan* is to be pow by a 185 hp Continental, and has a crui range of 750 miles. I understood that it w have a 165 hp. Continental, and a 620-mile ra

R. D. CUNNINGHA

Greenfield, Illinois

Your second set of figures we quoted in Pilot's Report on this plane in the Septe issue of SKYWAYS. Actually, both sets right, depending on how you look at it. 165 hp and the 185 hp Continental are the s engine, the horsepower developed depending rpm's. And the range of any plane al depends on the load. A four-place plane wil farther with just one person than it will four and a full complement of baggage.—ED.

•

Page Arentz!

Dear Sir:

I enjoyed reading the article by Bob Ar on aerial photography in the March issue SKYWAYS. The authentic, accurate and cle written presentation of this subject by Arentz reflects credit on your excellent ma zine, its staff, and the authors from whom accept manuscripts.

I have eight years' experience as an a photographer, and own a surplus PT-17 w I fly myself so I feel qualified to commend Arentz and SKYWAYS for a good article. I have more from Arentz. There is a fellow knows what he's talking about and can put i clear, understandable English, still maintai a story with reader interest.

ART HAWKRIDG

Wilmington, Ohio

•

Occupational Hazard

Dear Sir:

In your March issue there is an article c "Sky Shutterbugs" in which you discuss "bends." I believe that if you will investi aerocembolism more thoroughly you will find discussion to be incorrect. According to A publications and my experience with alti flying, the "bends" are still caused by decrea pressure. The "bends" seldom occur below 25 feet and can be relieved by a descent.

WILLIAM FUCH

Philadelphia, Pa.

Look again, Reader Fuchs, and you will find Mr. Arentz spoke of an occupational hazard w is a "strange counterpart" of the bends. He not speaking of the bends.—ED.

•

So Would We

Dear Sirs:

Just thought I would let you know how m I enjoyed the story by John Jennings in the A SKYWAYS. ("Canada in a Cub"). The trip t boys took is one I would sure like to take my

DON ROGE

Princeton, N. J.

WHERE WILL YOU BE-

ONE YEAR FROM TODAY

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Will you still be waiting to start your training?

Will you be struggling along on a small wage?

OR-

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The choice positions in aviation will go to the men who enter the industry first. This is only logical. That's why it is so essential for you to receive your training *now*... so you will have seniority over the thousands of veterans who are taking "the long way around" via four years in college or are waiting for openings in schools that are now full.

California Flyers, utilizing modern, streamlined training methods, provides a double-barreled short-cut to these choice positions—immediate enrollment *plus* graduation in one year. Enter California Flyers *now* and you, too, can be enjoying the aviation mechanic's high salary and respected position *one year from today.*

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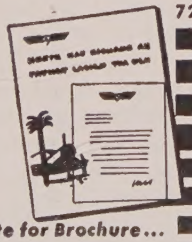

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EDITORIAL

STUDENTS taking A and B Mechanic's Courses have been doing some worrying of late and operators of approved schools have been worrying right along with them.

The cause of it all is another proposed change in requirements in Civil Air Regulations Part 24, which controls Mechanic Certificates. The great majority of the present group of students are former soldiers, trying, under the G. I. Bill of Rights to get the education they need for jobs. At the moment of going to press, the chances seem good that no such change will be made—because of the storm of protest which has been dinning at the CAB's Safety Bureau, but whether it is made now or not, the subject needs some airing.

Highly technical skills are demanded of aircraft and engine mechanics, and rightly so because of both public and individual flyers' safety. As aviation goes upward in its increasingly complicated techniques, the increase in such skills must advance with it. CAB has done some worrying on its own as to whether the training being given is sufficiently detailed to provide for all the new advances in props, internal mechanisms, hydraulics, etc.

The now-proposed changes would increase minimum instruction hours for the course on airframes from 960 to 1,360 hours, with an increase from 960 to 1,120 for power plants. Propellers, radio and instrument ratings would be given separately with fully as rigid courses required. Combined A and E course time was first set at 3,400 hours, then dropped to 2,480. The 3,400 hours would have been an increase of 1,400 hours or 35 weeks more instruction at an additional cost to the student of approximately $500.

That has been the picture which has confronted the thousands of ex-G. I.'s who are spending their Government education money for the instruction. Spokesmen for the schools say: "Students just will not go to school in a Mechanic's Course for this long, as we have learned through experience in the past 18 years. It would be eminently unfair to thousands of enrolled students who have already contracted for their courses under present regulations. They are already complaining that the one-year course is too long. CAA controls the situation, anyway, since all graduates must pass CAA inspectors and they are in a position to vouch for the excellence of instruction and competency of the graduates."

The Aeronautical Training Society, to which the majority of approved schools belong, wrote the Safety Bureau: "There is no doubt that our people are appre tive of the purposed revisions . . . H ever, certain points should be consider regulations should be kept simple understandable; anything which ra the cost of purchasing, operating or pairing aircraft cuts down the num of persons who can afford to fly; thinking of safety, remember that a thing which makes possible greater ume of permanent business imposes te nique, increases know-how and sa besides cutting costs. Utilizing spec ized skills of present mechanics is other consideration. There are, for ample, top engine mechanics whose s cial knowledge of given types of engi is far and beyond any ordinary A and yet they have never wanted to do frame work. Such specialists should have to take examinations from m whose knowledge is inferior to their

Boiled down to essentials, the situat amounts to this. Let the mechanic pr tise his profession on the basis of training. A man trained on wood a fabric planes should work on th types; if he takes his training on lar planes, he will be equipped to w properly on them. The airlines emp specialists; the armed services and factories train their men in their tremely complicated skills. But ma good, run-of-the-mill men are needed handle the ordinary up-keep and rep of the small planes of the country. P sonal flying depends on them. Approv Repair Shops are equipped to give t specialized, extra fine work needed instruments or special engine repairs. these men are eliminated, the stude now enrolled will lose, the personal flye costs will mount and the taxpayer w pay more—and there will still be appreciable increase in safety.

The Board seems to feel that it w again let the matter drop—"just cle up the regulations a little." That is u official, back-of-the-scenes talk. In t meantime, everybody has been unhapp Wouldn't it be more sensible, if som thing must be done ultimately, to pl for it a couple of years in advance, wi everybody concerned having his say a knowing when to expect what—or bett still, making full use of Inspector-Scho cooperation, depend on the canniness private industry to keep a jump ahe of demand?

Good intentions on the part of t Bureaus in Washington can be made meet sensible needs of the industry, a still maintain the top level of safety a economy which the public has a rig to expect.—J. Fred Henry.

ANOTHER AVIATION EXPERT PREFERS Esso

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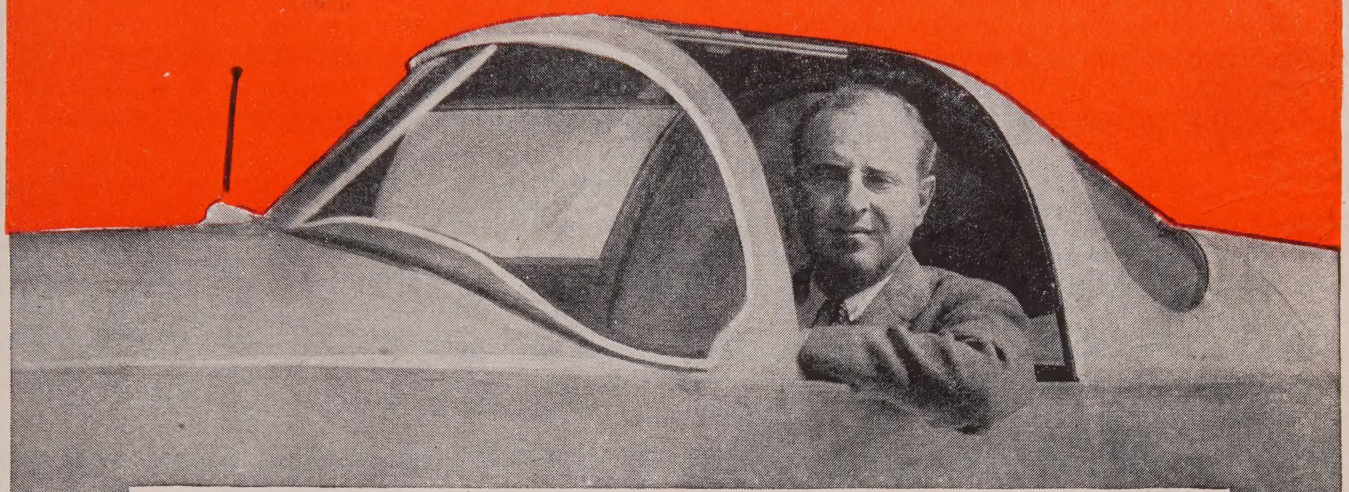

says J. Wayde Stewart
owner of Stewart Airport Company
Parkersburg, West Virginia

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"ESSO Aviation Dealer service is right, too. And that is also important. Because of it, I can give my customers attention that will keep them coming back for more. To a great extent the future of private flying is going to depend upon smooth servicing of private planes.

"These things together with the enormous and well earned customer acceptance of the ESSO name are the reasons for my choice of ESSO."

Signed: J. WAYDE STEWART

J. WAYDE STEWART got his start in aviation in 1923. Although too young to accept a commission, he attended Officers' Training School at Chanute Field in Illinois. In 1932 he started private flying and in 1936 bought the Parkersburg Municipal Airport.

Mr. Stewart has been Treasurer of First Region, National Aviation Trades Association; conducted Civilian Pilot Training programs before the war and War Service Training programs during the war with one of the largest schools in the country. He is also distributor for ERCOUPE in West Virginia—Kentucky—Ohio and dealer for North American "Navion."

J. Wayde Stewart, knowing aviation from the ground shops to the planes in the air, prefers Esso Aviation Products . . . because he likes things RIGHT . . . and knows he gets *right service* backed by *right quality* and *right aviation research* with ESSO AVIATION PRODUCTS!

PROP WASH

Aero Oddities

Close Shave. Ryan Chief Test Pilot Al Conover in new *Fireball* makes "wheels-up take-offs" by streaking down runway until he gets flying speed, then upping gear, continuing down runway. Recent inspection after one "low" take-off disclosed one-eighth inch had been sheared off all prop blades. (*W. Brotherton, San Diego, Calif.*)

House Hunter. Instructor Ray Fry had three days left to find house for wife and new baby, took off in *Cub*, flew low over outlying area, spotted house that looked vacant, landed in nearby field. Instructor Fry now has home just 15 minutes from airport. (*J. Fontaine, Erie, Pennsylvania*)

Come Again. Pilot C. H. Osborn took off from Oakland Airport to try for new lightplane altitude record. Four hours later, he landed, stood by as mechanics removed sealed barograph. Mechs found no reading. Pilot Osborn had forgotten to turn switch which starts instrument recording altitude. (*C. Miller, Tracy, Calif.*)

Hands-Off Flying. Illinois student pilot in *Cub Cruiser* became lost on night flight, trimmed ship, bailed out. Plane was found next day in perfect condition in field in neighboring state. (*W. Wiley, Sparta, Illinois*)

Winged Beauty. Former Marine Pilot H. C. McGrew, owner of beauty supply company, delivers beauty and barber supplies via plane. (*E. Gentry, Marthaville, La.*)

Horse Power. Pilot J. Simon landed plane in farmer's field, walked to town to see friend. Returned to find horse had enjoyed dinner of wing and stabilizer. (*P. Sorg, Dolliver, Iowa*)

After You, Alphonse. Cessna *Bobcat*-owner N. Topham, in traffic pattern over Palo Alto Airport, saw twin-Beech pilot F. Todd land ship wheels up. Pilot Topham, so engrossed in feeling sorry for Pilot Todd, came in . . . you guessed it . . . wheels up! (*R. Russell, Palo Alto, Calif.*)

Like Falling Off Log. Army mechanic in Philippines read ad that said "anyone can fly a *Cub*," spotted idling L-4 on flight strip, got in, took off, circled field and landed unhurt, unaided. Is now taking flying lessons—dual after solo. (*W. Martens, Freeport, N. Y.*)

Helpmate. Bend, Oregon, pilot Joe Van Wormer wanted to take aerial photos of nearby mountains, took wife along to hold cameras, change filters. Finding ship and cameras too much to operate at once, he suspended operations for few minutes to show second-flighter wife how to fly straight and level, make turns, then let her fly for 30 minutes while he got pictures. (*E. Van Wormer, Bend, Oregon*)

What Next? Instructor Mackenzie told student pilot to clear engine every 10 to 12 seconds during gliding turns. Student did, but gave Instructor violent ride consisting of dives then near stalls. Mackenzie turned to see what student was doing, found him paying no attention to plane's attitude but steadfastly punching buttons on chronograph watch, timing every 12 seconds between engine clearings. (*Ian Mackenzie, Syosset, L. I., N Y.*)

In Hot Water. Airport Manager L. Choate and T. M. Cox were up for a ride, spotted half-drowned calf in a creek. Choate landed plane in nearby field. Cox roped calf, returned it to its bawling mother on dry land. (*N. Hegland, Miles City, Montana*)

Who Better? Orville Wright is taking flying lessons at Spokane, Washington. This Orville, 34 years old, is no relation to THE Orville. (*H. Helfer, Va.*)

It's a Small World. Pilot Fred Walker took a friend for plane ride, friend became ill, demanded pilot land ship. Walker did, on a highway, taxied up to gas station, came face to face with local CAA inspector. Result . . . 6 months suspension of ex-pilot Walker's license. (*M. Walker, Offerman, Ga.*)

Can't Hear You. Pilot Murphy, getting in solo time, hopped a PT-19. Poked head out from behind canopy, had his radio earphones blown off. Murphy spent next 10 minutes calling field's tower, "Army 42-83251 Calling Stinson Field. I lost my earphones. Over!" (*B. Murphy, Malden, Mass.*)

To The Rescue. Airport Operator Wattenbarger had his boat stolen, reported it to local police, got no action so applied to FBI. Nothing happened. Finally sent his daughter out in 65-hp *Cub*. She patrolled the river, spotted hidden boat, effected its return to father. (*J. Davis, Knoxville, Tenn.*)

Wings of Music. Baldwin Piano Co., of Cincinnati, Ohio, had to get 40 spinets, three uprights and four grand pianos to its Boston outlet. American Airlines Airfreighter came to the rescue, hauled the 12,000 pounds of pianos to Boston. (*Mrs. Corbin, Va.*)

Birthday Present. When Mrs. Clara Fricks, of Goshen, Ind., celebrated her 80th birthday, she was asked what she wanted as present. Said "Plane ride," got it.

Att'n Readers:

PROP WASH is your column. If you have any news-note oddities pertaining to aviation, send them to SKYWAYS, *Prop Wash Editor, 444 Madison Avenue, New York 22, N. Y. Five dollars will be paid the sender of each "oddity" printed on Prop Wash page. In cases of duplication, the Prop Wash contribution first received at the office of the editor will be honored. Contributions cannot be returned unless they are accompanied by stamped addressed envelope. Decision of the editors is final.*

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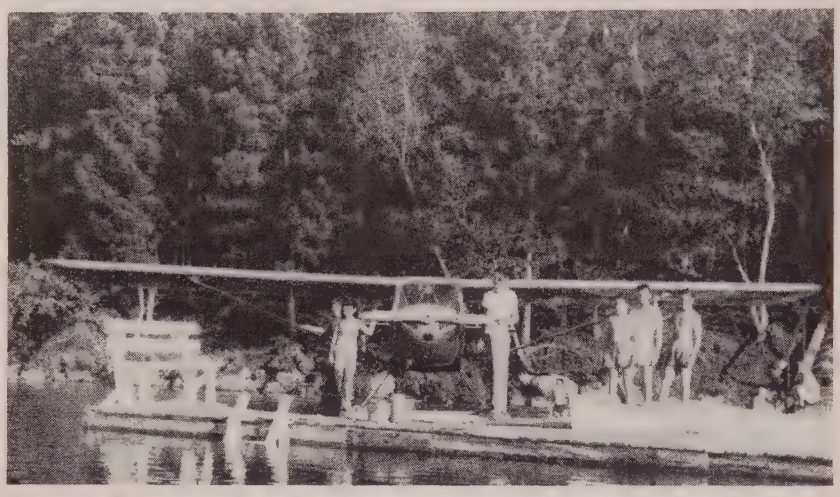
Flying Sportsman News

Pre-Flight Planning Simplifies Alaska Air Trips

BATHERS SHARE LAKE WITH FLOAT-PLANE



TWENTY MILES from the source of the Mississippi lies Boulder Beach *(above)* on Potato Lake, near Rark Rapids, Minnesota. Potato Lake is noted for its excellent fishing of all varieties; wild life abounds in the area; and all sports are available there or nearby

If you're expected, you'll go through quickly and easily

Every private pilot's license issued brings Alaska that much closer to the United States and its flying sportsmen. The great surge of interest in this frozen territory to the north on the part of Stateside flyers need not go unsatisfied, according to Roy Heaton, manager of Merrill Field, Anchorage, Alaska.

Lightplanes can fly to Alaska with a minimum of red tape and inconvenience if the flights are carefully planned. All flights should be cleared with U.S. Customs at Great Falls, Montana, then the flight plan to Lethridge, Canada, should be filed. There the pilot will check with Canadian Customs before he enplanes for Edmonton, where he must check again and obtain clearance from the R.C.A.F. From there his route follows Grande Prairie, Ft. St. John, Ft. Nelson, Watson Lake, Whitehorse, Northway, and Fairbanks. The longest hop on this course is from Whitehorse to Northway, 270 miles. Whitehorse is the last northbound Canadian stop, and Canadian Customs must be cleared there. If stopping at Northway, all concerned must be properly advised in advance, since fuel from surplus Army stocks there is available only as a courtesy to the transient pilot in an emergency.

Heaton advises that the trip be planned so that the pilot will not have to call customs officers before 8 A.M. or after 5 P.M., or on Saturdays and Sundays.

Equipment for such a trip should include an axe, enough food for several days, insect lotion, compass, dry matches, flashlight, sleeping bag, rifle, and fishing tackle. Heaton suggests Flight Charts Nos. 13, 14, and 15 for the trip, and points out that the flyer may follow the Alaskan Highway for a great portion of the route.

Famous Sportsman Prefers Seaplane

Add to the list of famous names which have taken to the air in recent years, that of Lee Wulff, well-known sports writer-artist-photographer-lecturer. Lee recently took delivery on a Piper *Cub* equipped with Edo floats, and is now in the process of mastering the flying technique. With his base of operations at Round Lake, upstate New York, he is looking forward to his first solo trip—fishing in the Adirondacks!

ATTENTION TRAPSHOOTERS!

The 1947 Grand American Handicap Trapshoot will be held this fall at Vandalia, Ohio, August 18 to 23 inclusive, with preliminary shoots taking place there on August 15, 16, and 17. For those intending to fly to the meet, there is the Polk Grove Airport, 3.6 miles from town. This field, on the Cincinnati Chart, has an elevation of 975 feet, contains 110 acres, and is partly fenced. There are lines on the south side, woods on the east, and trees north.

The many outstanding state meets, with their sponsors, taking place the latter part of June and in July, include:

June 19, 20, 21, 22—Chevron Sports Center, LaGrange, Ill.
June 20, 21, 22—Spokane Gun Club, Spokane, Wash.
June 20, 21, 22—Nassau Trapshooting Club, Inc., Mineola, L. I., New York.
June 21, 22—Washington Gun Club, Inc., Wash., D. C.
June 27, 28, 29—Creve Coeur Gun Club, Creve Coeur, Mo.
June 28, 29—Ipswich Fish & Game Assn., Ipswich, Mass.
June 29—Rock Rapids Gun Club, Rock Rapids, Iowa.
July 4, 5, 6—Sun Valley Gun Club, Sun Valley, Idaho.
July 4, 5, 6—Capitol City Gun Club, Oklahoma City, Okla.
July 4, 5, 6—Lincoln Park Trap., Inc., Chicago, Ill. (Mid-West Handicap.)
July 8—Yorklyn Gun Club, Yorklyn, Del. (Penn.-Del. Twilight League.)
July 12, 13—Rockford Gun Club, Rockford, Ill. (Illini Indian Northern Zone Shoot.)
July 13—Darlington Gun Club, Darlington, Md. (Mid-season shoot, Maryland-Del. League.)
July 18, 19, 20—Denver Municipal Trap Club, Denver, Colorado.
July 18, 19, 20—Cut Bank Trap Club, Cut Bank, Montana.
July 18, 19, 20—Clinton Gun Club, Clinton, Indiana.
July 19, 20—South End Gun Club, Reading, Pa. (Middle Atlantic States Championship.)
July 22, 23, 24—Hill Top Gun Club, Paris, Ky.
July 24, 25, 26, 27—Durand Rod and Gun Club, Durand, Wisconsin.
July 26, 27—Eastern Maine Gun Club, Trenton, Me.

NEW HAMPSHIRE OPENS CAMPSITES TO PUBLIC FOR SUMMER

The Granite State, long known to anglers for its fine fishing, announces the opening dates of several public campsites, close to popular wilderness areas. Milan Hill State Park, near Gorham, opens June 14; Moose Brook State Park opens June 1, along with Lafayette Campground at Franconia Notch; and Monadnock State Reservation, at Jaffrey, opens May 1.

With the fishing season open from May 1 on, experts in New Hampshire are expecting excellent fishing this year. Brook, Rainbow, and Brown trout are well stocked, with an expectation of a 15 per cent increase.

Information on campsites can be obtained from the Recreation Commission Division, New Hampshire Forestry and Recreation Commission, Concord, N. H.

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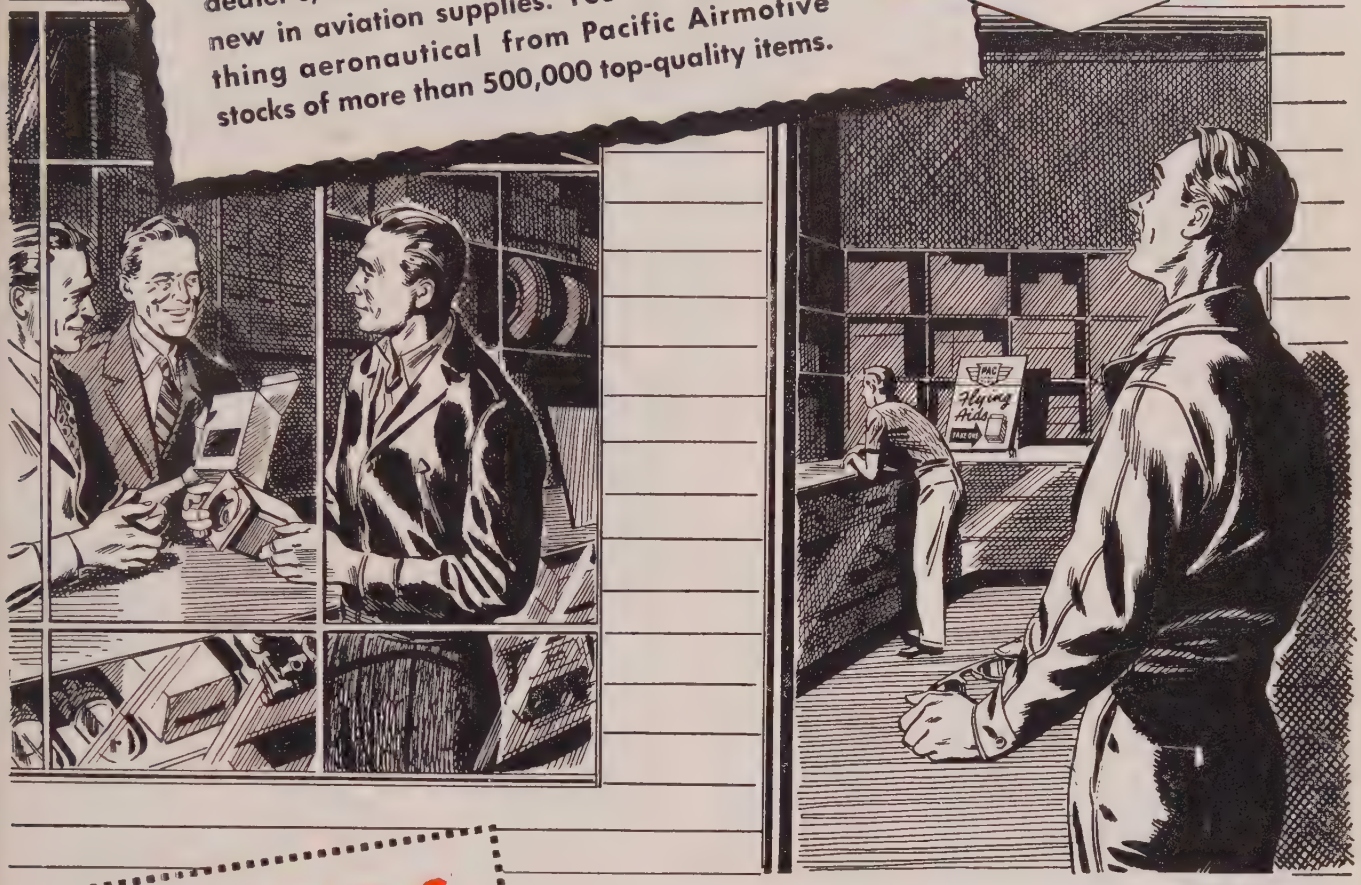

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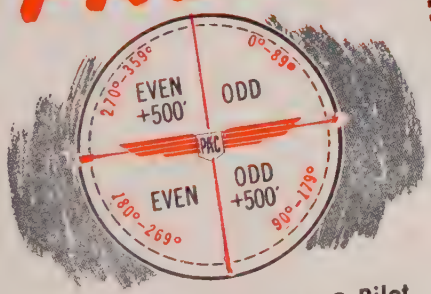

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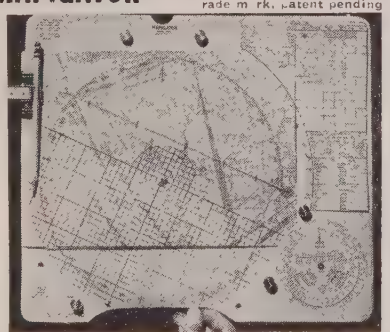

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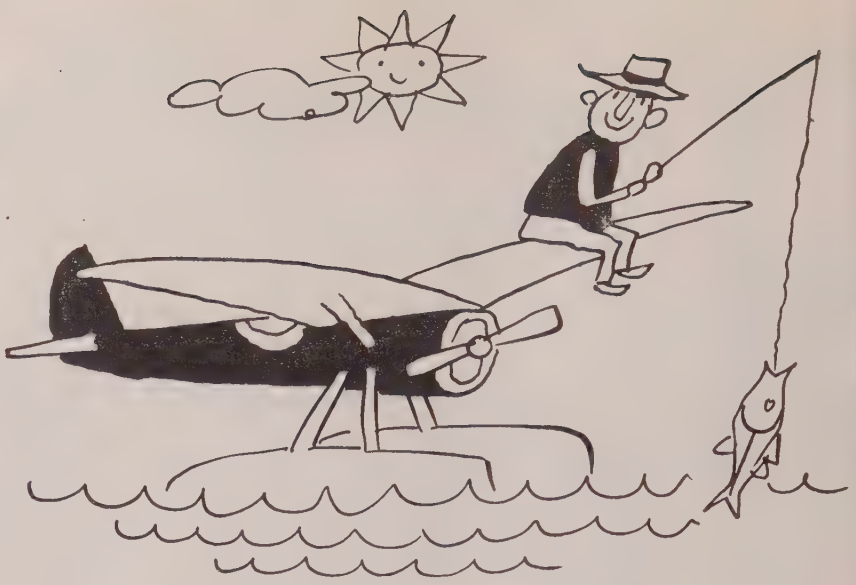

Where to Fly

Maine

It often has been said that a sportsman—either fisherman or hunter—hasn't lived until he's cast a line or drawn a bead in the State of Maine.

When it comes to fishing, reports have it that it was never better in Maine than it is right today. And not only is the fishing good, but the variety offered tops just about any other state in the union.

For the commercial airline traveler, Northeast offers frequent flights daily to all of Maine's larger cities. And should the fisherman or hunter head for the more remote areas within the state, there are many excellent charter services that will fly him wherever he wants to go. One thing for the visiting angler to remember is that if he wants the best information regarding good streams and lakes, ask any one of the charter service pilots. Many of them double in brass as guides as well as pilots.

The Down East Airlines, operating out of the Augusta State Airport, Augusta, Maine, will fly you to the Princeton area for either hunting or fishing, to Moosehead Lake for salmon, trout or touge, or to Rumford and Bar Harbor for such outdoor sports as skiing in the wintertime and boating and deep sea fishing during the summer months. A letter to this airline will bring you additional information regarding lodging facilities.

Another A-1 charter service operates out of Portage Lake Seaplane Base. The owner, Russ Springer, knows every nook and corner of his home state, and he'll fly the flying sportsman, via seaplane, to any of dozens of really excellent fishing spots. In addition to operating a good seaplane charter service, he maintains a plane service depot and should the flying sportsman fly his own seaplane into Maine, he'd be wise to let the Portage Lake Seaplane Base owner take care of his ship while he visits the fishing spots. Mr. Springer can be contacted at Portage, Maine, for information regarding lodging facilities, camps, etc.

And speaking of camps, Maine is dotted with them, any one of which is excellent both from the standpoint of service offered and location. At the foot of Mt. Katahdin in the Baxter State Park area are the Kidney Pond Camps. Rates run from $49 per person (American Plan) per week for a cabin with plumbing facilities, to $45 per week for a cabin without plumbing facilities. Guests at the Kidney Pond Camps are flown to outlying camps where trophy fish can be caught. Write the Doxsee's at Millinocket, Maine, for details.

Another spot is Long Lake Camp, near Princeton. Here is everything a fisherman or hunter would want—guides, boats, bait, tackle, excellent sleeping accommodations and good food. Fishing licenses are sold right at the camp. The rates here run from $6 per day, including board and room, to $2 per day per person for housekeeping cabins. Consult Ed. Jones at Princeton, Maine, for reservation details.

The Hunter Cove Camps at Rangeley Lake, Maine, also offer the fisherman and hunter very good accommodations. This is open the year 'round, and in addition to hunting and fishing, offers its guests swimming, boating, golf, tennis, dancing, and winter sports in season. Rates are $6 per day, American plan.

Personal Pilot Information:—

Millinocket Municipal Airport—*Millinocket. (Cl. 4)—El. 404 feet; 2 bituminous runways, E/W, NW/SE. Navigational facilities—rotating beacon, boundary, range, runway. Obstructions—Trees, ESE; Stacks, W; Hill, NW. Hangars, control tower. 91 Octane gas. Taxi to town 0.5 miles SE. (Lewiston Chart)*

Princeton Municipal Airport—*Princeton. (Cl. 3)—El. 250 feet; 2 concrete runways, NW/SE, NE/SW. No service at this time but is used as landing field by flying sportsmen. (Lewiston Chart, classified as Emergency Field)*

(Continued on page 64)

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HANGAR FLYING

Silvaire Goes Down

DALLAS, TEXAS—When Luscombe Airplane Corporation reduced the price of their 65-hp *Silvaire* to $2,495 (flyaway price) their plane became the lowest priced all-metal ship on the market.

This model (a side-by-side, two-placer) is fitted with a 14-gallon fuel tank in the fuselage, has a range of more than 300 miles, cruises at 105-mph and lands around 40 mph. It is now lower priced by nearly $100 than the comparable prewar model and yet has the Luscombe all-metal stressed-skin wing which the prewar plane didn't have.

For the Bookworm

NEW YORK, NEW YORK—*The Flying North* by Jean Potter is published by The Macmillan Company. This is a story of Alaskan pilots, both of today and yesterday . . . it is humorous and authentic and a good inside story on why Alaska has the "flyingest people."

The Art of Flight Instruction by Edward C. Bailly Jr. is an exceptionally readable book that every instructor or would-be instructor should read . . . it is published by Harper and Brothers.

Can You Top This?

ST. PETERSBURG, FLORIDA—An aviation operations institute was held here to acquaint school principals with the workings of aviation . . . featured on the program for the principals attending was a flight in a U.S. Airlines' Beechcraft.

As an elderly, gray-haired lady principal started aboard, the pilot (helping the principals board the plane) grasped her arm, grinned and said, "O-ho! My old sixth grade teacher!" She fluttered a little and said, "Well, bless my soul, if it isn't little Johnny!"

"Yes, ma'am!" the pilot replied. "And I've been waiting 15 years for this! Now, you just get right up there, and take your seat and be quiet!" *(From Office of Aviation Information)*

For Summer Pilots Only

WASHINGTON, D. C.—If you're one of the rare pilot species that flies only in the summer, there's been a change made since you flew in the summer of 1946 that you should know about . . .

Under an amendment, effective February 15, 1947, a pilot must carry his pilot certificate *at all times* (to include all seasons) while piloting aircraft.

Grassy Field Take-Off

STORMVILLE, NEW YORK—In summer everyone and everything seems to take to wings—*i.e.* birds, planes and bugs. Bugs can and do get into engines and cause engine failures—they make their way in through the air intake but they don't enter voluntarily. Taxiing and taking off grassy airports, the bugs are drawn in by suction up through the air intake (some planes have screens over the intake . . . some don't).

If the pilot will use carburetor heat on take-off he can keep the bugs and grasshoppers out of his plane's engine. However, be very sure:

1) There's room for a longer take-off run (use of carburetor heat will take away at least 100 rpm necessitating longer run);

2) To pull carburetor heat off when aircraft is 100 feet up (air is nearly "bug free" at this altitude) inasmuch as use of carburetor heat not only affects the efficiency of an engine but takes hours off its life.

Radio Operator License

WASHINGTON, D. C.—To operate radiotelephone equipment on aircraft, pilots must possess a Federal Communications Commission license—this can be obtained for small fee of $1.00 from most airport managers.

Special Registration Letters, NL

WASHINGTON, D. C.—Civil Aeronautics Board has provided for the special registration letters, NL. to identify military surplus aircraft which cannot be used to carry passengers or cargo for compensation or hire.

Hats Off!

TETERBORO, NEW JERSEY—Robinson Aviation, Inc., Flight Service Division, has published their rates and methods of charging for work and services performed on personal aircraft—in the form of a slick brochure. One of their aims is to help establish *flat rates for various classes of maintenance work on aircraft and help take the "bite" out of the fixed-base operator's charges.*

Plot Wisely

URBANA, OHIO—A local company, Grimes Manufacturing Co., figured out a way to "plot a course in a hurry." Since most of us fly because it's a speeded up method of getting there, the company may have something in its transparent (acetate) sticky tape. It's a half-inch wide on which a straight edge and a scale is printed—for sectional charts the navigation tape has a scale of 1 to 500,000; for world charts, 1 to 1,000,000.

Night Training

ALEXANDRIA, VIRGINIA—At the Hybla Valley airport, flight instruction is on a 24-hour basis. A prefabricated packaged lighting, put out by the American Gas Accumulator Co. is used to light the runways. First student to take advantage of this was Warrant Officer Arthur L. Mosier (see picture above).

After 8 hours 40 minutes dual instruction (average dual required pre-solo), all at night. Mr. Mosier made his first solo, also at night. His instructor "Butch" Burchinal was consulted for some pointers about teaching students at night. We reprint his remarks:

"The skyline of Washington, D. C. and prominent lighted highways afforded the 'lighting' for orientation and reference marks (for knowing where plane is and what the altitude of plane is at all times) . . . stalls were given at altitude of 3,000 feet . . . spins were given on the seventh hour (precision spins!) . . . all landings were made power off . . . race-type traffic pattern (500 feet) was used; first turn after take-off is started at end of runway or 250 feet; after turn has progressed 90° trainee will be in a position to make it back to airport anywhere in the circle . . . student is taught to stay within gliding distance of the field for actual emergencies . . . student learning at night tends to overbank turns (much the same as daytime trainee tends to underbank) . . . only problem of night solo not encountered in day flying is the proper letting down to the correct altitudes; the students are slow in recognizing this . . . advantages to student in night training are: 1) Instruction is more intense; 2) Greater confidence is attained.

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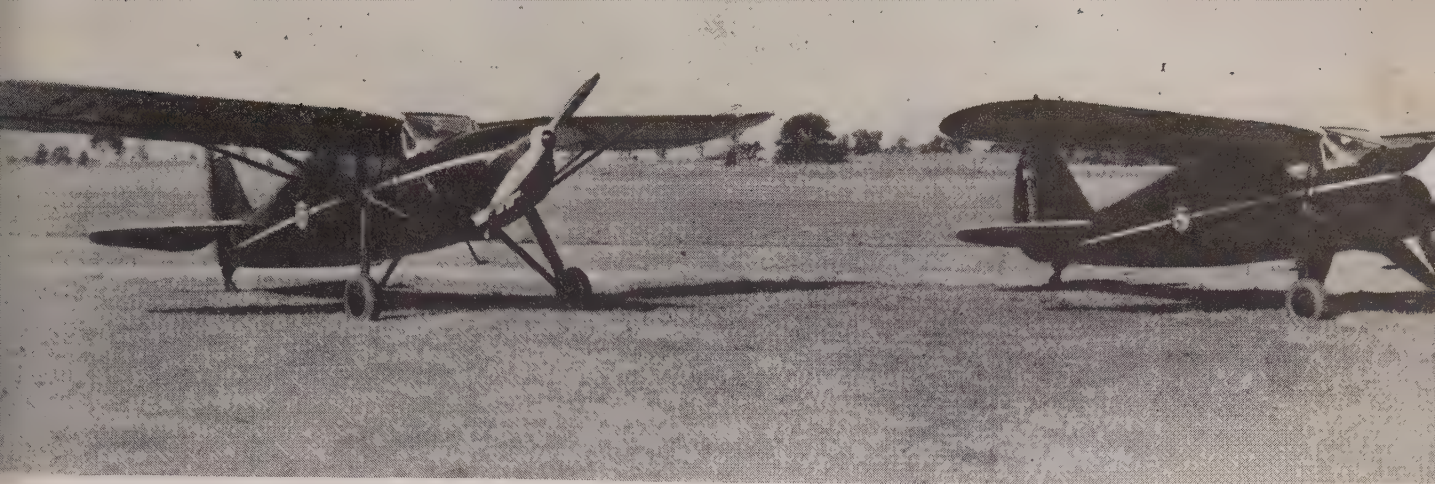
FIFTEEN YEARS AGO game patrols were flown in old-style open-cockpit planes such as this *Swallow*

WILD LIFE SURVEY calls for an accurate counting of waterfowl and other wild life every year



GAME COMMISSION today uses such planes as these two Fairchilds which were purchased for Alaska

FORESTRY AIR FORCE

By A. A. HOEHLING

VOCAL proponents of a single air arm for our Army and Navy may be horrified to learn that Uncle Sam is maintaining not two but at least four air fleets.

However, any rivalry between the other two—both of which are still in swaddling clothes—is not apt to endanger our national security. Whether or not there is any coordination between the two will mean little to the President.

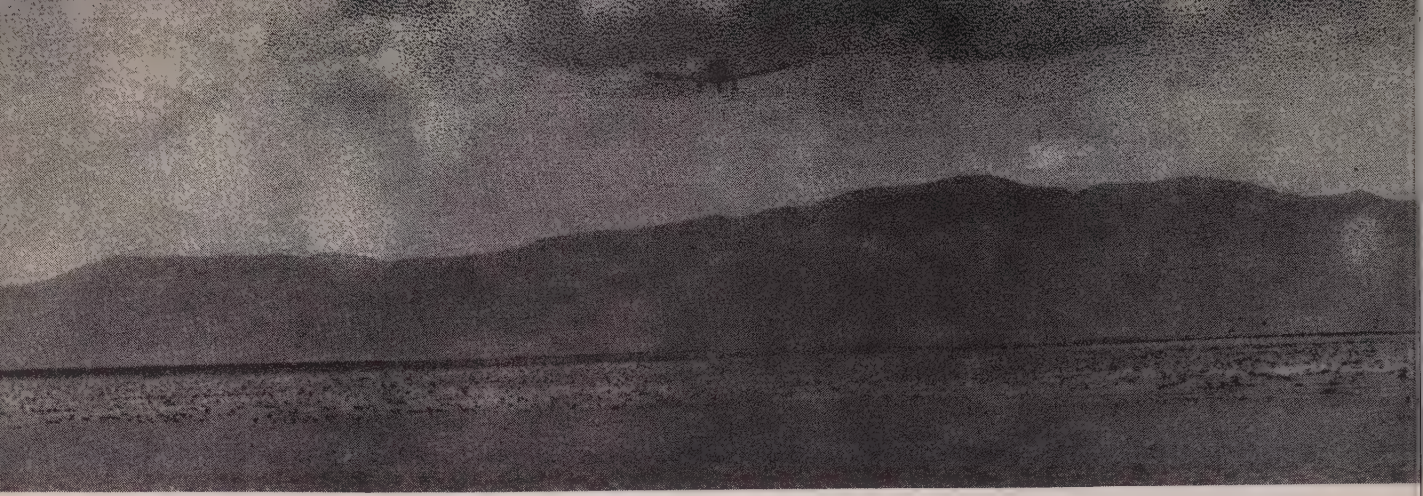
One of them is the "air force" of the Department of the Interior, the other that of the Agriculture Department. Right now the former numbers 25 planes and the latter 15 planes.

These figures may seem small, but it is the first time in the history of the country that either department has boasted squadrons of planes they can call their own. And this year all 40 of them, plus chartered planes from private fields, Army, Navy and Coast Guard planes, a few Navy blimps, and helicopters, are setting out on aerial programs of their own never before attempted in such scope by non-military bureaus of our government.

Their goals will not be smashed enemy cities, sunken sea raiders or the twisted wreckage of hostile bombers or fighters—but rather a protective service saving millions and millions of dollars of the taxpayers' money (your money that is, and mine).

CHIEF PILOT for Agriculture Dept's bug blitzing is veteran airman Lon Whittam *(below)*, once a barnstormer

SKIMMING CORNSTALKS or fruit trees calls for precision flying. Best pilots are former artillery spotters



DUCK CENSUS in Colorado was taken by shooting pictures from plane, then later counting each dot on the film

These planes, to attain this goal, will be flown with all the method and deadly seriousness of the wartime missions of our Army and Navy.

Let's see first what the Agriculture Department is going to do.

Unconcerned with such atom age aerial problems as the stratosphere, supersonics, or jet propulsion, the Bureau of Entomology and Plant Quarantine, which operates the fleet, is going all-out to lick such crop and forest destroyers as the Japanese beetle, the gypsy moth, the white fringe beetle, the pink bollworm, the spruce bug worm, and the Wisconsin spittle bug which seems to have the appetite of a starved lion.

Equipped with specially designed rotary sprays, the planes will treat infested areas at an average price, not counting the DDT, arsenate, and other solutions used, of about 50 cents an acre.

Taken alone, this figure may not mean much. But, in these words David Hall, a bureau spokesman, explains its significance:

"We proved last year that one plane can spray 1,000 acres in one day. It would take 70 men with seven machines a total of five weeks to cover this same area by old methods."

Even with these latest aerial bug-blitzing techniques, the task ahead of the Agriculture Department is a gigantic one.

Damage caused by insects to the vegetation of this country has been estimated by entomologists at anywhere from 2 to 4 billion dollars a year. Destruction is on the increase.

Scientists, by dint of painstaking research and wholesale expenditure of materials and man hours, finally get one bug to the point where he yells "uncle" only to find that a new and far more devastating bug has appeared somewhere else.

The gypsy moth, for example, unaided by any other of its cousins of the insect world, denuded the foliage of some 800,000 acres of woodland last summer in New England and Northern Pennsylvania.

In this general area the department managed to treat aerially some 100 square miles of timberland by the end of summer.

The boll weevil in 1945 took a toll of 639,000,000 pounds of cotton worth $170,000,000. It is feared that this year, even with our stepped-up control methods, 40 per cent of the crop will be lost.

The European corn borer in 1945 cost the American farmer nearly $37,000,000.

The common horn (*Continued on page 46*)

DUSTER PLANE, spreading DDT mixture over infested forest, flew at height of 50 to 100 feet above tree tops

ON THE EDGE of pool, Bill Ladwig tells Zada Arentz of the beginners who did not beware and got a ducking

BEGINNER BEWARE!

THE drinking-water situation around most airports sells countless thousands of bottles of soft drinks every year. But out in western Idaho, where veteran pilot Bill Ladwig runs the Western Aircraft Corporation at Caldwell, Idaho, there are two large, ice-cold ponds of perpetually running, fresh artesian water. The water flows from a well on airport property and there is a limitless supply of it that never ceases, year 'round.

The flagstone walk at the Caldwell airport passes between the two ponds that are rife with water lilies and teeming with fish. Rainbow trout stir lazily in the crystal-clear waters, sharing their home peacefully with goldfish of reds and whites.

Visitors spend hours by the cold waters enticing the fish to rise for tid-bits to the surface of the ponds, but for the airport initiates there is more exciting sport that hinges close on practical jokery.

About seven feet from the pond's edge is an engineering marker, six inches square, embedded in cement, which protrudes about eight inches above the surface of the water. Sooner or later, with unflagging regularity, a newcomer—either instructor, visitor, or neophyte student—comes to join the regulars in a row outside the building. Occasionally one of the old-timers will walk to the pond's edge, balance himself delicately on his toes, swing his arms carefully as though gauging the distance for a leap and then, seemingly at the last moment, lose his nerve and fail to try the leap to the top of the tiny concrete marker. The others immediately josh him loudly and start recalling how many times the leap has been done by so-and-so.

Arguments are drummed up, clamor is aroused, betting money is waved, some skeptics vow it cannot be done. In short everything imaginable is hashed up to whet the stranger's appetite to have a try for himself at leaping from the shore to the top of the marker, and there, balancing himself, turn around and leap back—over the icy water many feet deep.

Sometimes it takes weeks to work a prospect up to making the leap. But, every year three or four eager beavers have a try at it.

But though many have leaped, none have landed . . . . on the marker, that is, and then returned, except by submarine, after splashing half the water out of the pond and seriously upsetting the equanimity of the lazy trout and goldfish.

And generally the water is so cold and the embarrassment of failure so great that the splashed one never inspects the brass marker closely enough while floating past it to see the little dab of blended grease that the practical jokers apply to it with a long pole kept behind the hangar.

This is much more exciting than sending the new mechanic's helper after strap oil, a gallon of prop wash or a left-handed monkey wrench, but the trout are on record as not liking it.

WHITE MARKER, at far right, looks like an easy jump

KEEP IT LIKE NEW

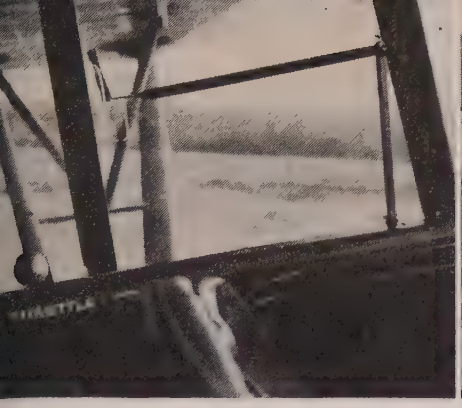
You owe it to your plane to keep it clean and polished

By C. B. COLBY

PLANE'S interior is important, too. Don't open bottle of soda pop at couple of thousand feet . . . it'll spurt all over that neat interior

WASH plane with soap flakes and water, using mop *without* projecting metal frame which might tear fabric. In winter, use dry mop

WAX POLISH without an abrasive will help preserve plane's finish. Use according to directions and wipe with soft cloth. Rub lightly



PLANE should be locked when at a strange airport to keep people from climbing in and out of it. This bar lock will lock window closed

GLASS cleaner is good for prop, too. Wipe off prop now and then. Dirt often conceals nicks. Don't use this on plastic windshields

FLIGHT over water calls for keeping pilot in shape, too. Wear a "Mae West". If you have seaplane, always keep "Mae" handy

REMEMBER when you got that brand new bicycle a few years back? You were going to polish it every day, oil it and wash it! But did you? No, not after the first week or two. Confidentially I didn't either, but the bike ran just the same and probably lasted just as long, and certainly was just as SAFE. BUT, airy-planes ain't bi-cycles, bub, as you well know . . . or do you?

One of the nicest things about a new aircraft is the slick feel of the fabric or metal when you rub your proud hand over it. But surprisingly few pilot-owners know how simple and inexpensive it is to keep that "just off the assembly line" look about your ship for not only months but years.

Captain Charles Banfe, Jr., of American Overseas Airlines, knows not only the answers but most of the questions regarding aircraft care. Herewith words of his wisdom you might well paste in your log book and "go thou and do likewise."

A well-kept plane, private owners are finding out, is a money saver right from the start. For example, one lightplane based at the Danbury, Connecticut, airport has gone 10 years without being re-covered or needing it while another at the same base had to be re-covered in less than 18 months! See what we mean?

Now that the CAA has eased regulations to enable the pilot-owner to make some repairs on his own aircraft and to do much of the minor maintenance work himself, the average Mister Pilot-Owner is more than ever eager to know what to do and how to do it. We'll keep our subject to the matter of fabric and its maintenance.

Aircraft are covered with fabric, plywood or metal, or combinations of all three. Taking care of this covering, no matter what it may be, pays big dividends in lower maintenance costs, better performance and appearance. As the plane and its covering grow older this care of the "skin" increases in its importance to the owner. That "skin you love to touch" business goes as well for aircraft as it does for the other well-known and equally expensive "device" that it was originally aimed at.

Of the three classes of covering, *fabric* exceeds all others in use, ease of injury and, luckily, ease of repair. As the fabric grows older it becomes increasingly perishable and brittle and prone to injury. This is especially true if the ship is staked out year 'round rather than hangared. It is, however, amazing the amount of sun, rain, cold, and ice that mere cloth and its covering of dope can take *provided it is given half a chance.*

A fabric-covered plane should be washed down at least once every month. If the plane is flown from a dirt field where it is subjected to repeated pelting with gravel, dirt and mud from the propeller and from taxiing, more frequent washings won't hurt. Dirt ground into the painted fabric will cause it to crack and deteriorate quickly.

Almost any type of soap will do the job, but be sure it does not contain any lye. This caustic chemical has a tendency to rot the fabric and harden the paint, either of which is bad. Soaps made from vegetable oils are the best for they are gentle with the fabric and yet product plenty of suds to do the job.

Once the fabric is clean, a good waxing will help to keep it that way, for dirt and dust has a tough time sticking to a glassy surface. About every three months give your fabric-covered ship a good polish with wax. The ordinary waxes and polishes will do but steer clear of the "sidewalk-salesman" type of polish, for you never can tell what it is made of. What might be okay for your metal-bodied car might raise havoc with the doped-fabric of your expensive aircraft. One thing to remember, however, is that you are not polishing either a hardwood floor or a car but a fabric surface. Do plenty of rubbing if your elbows can take it, but *take it easy on the pressure.* Too much pressure will stretch the fabric, and looseness and buffeting may result when in flight. A good wax job on the ship will not only make it look fast but will actually add a few more miles (*Continued on page 48*)

MAGICIAN by trade, Mardoni uses his lovely wife, Louise, *(left)* to help him pull ghosts out of houses

FLYER by preference, Clayton Hines (alias the Great Mardoni) uses Fairchild 24 to keep his engagements

Magic in the Sky

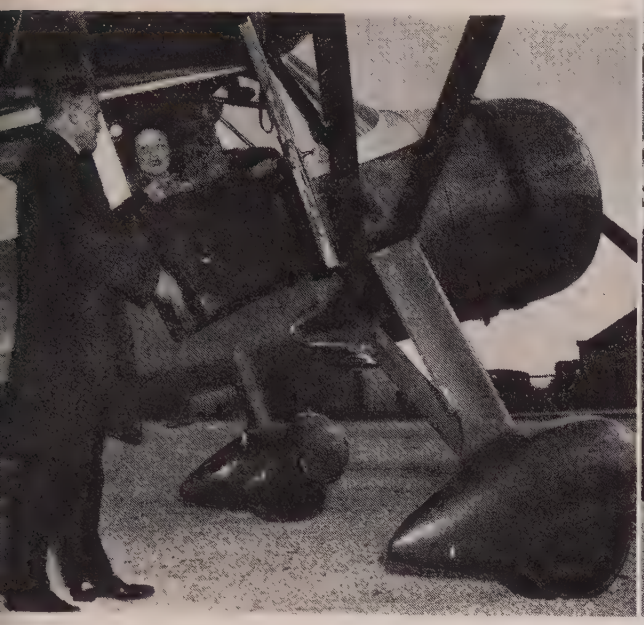
You don't have to be a magician to fly . . . nor fly to be a magician . . . but a little of both helps

By DOUGLAS J. INGELLS

OUTWITTING the public (above) but never being outwitted by distance or weather (right) calls for planning

FLYING 20,000 miles in 1946 *(right)* has made a fan of Louise. At present she is learning to fly her own Cub

SHOW goes on the road, only theoretically, in this act. Baggage *(below)* goes in the airplane too



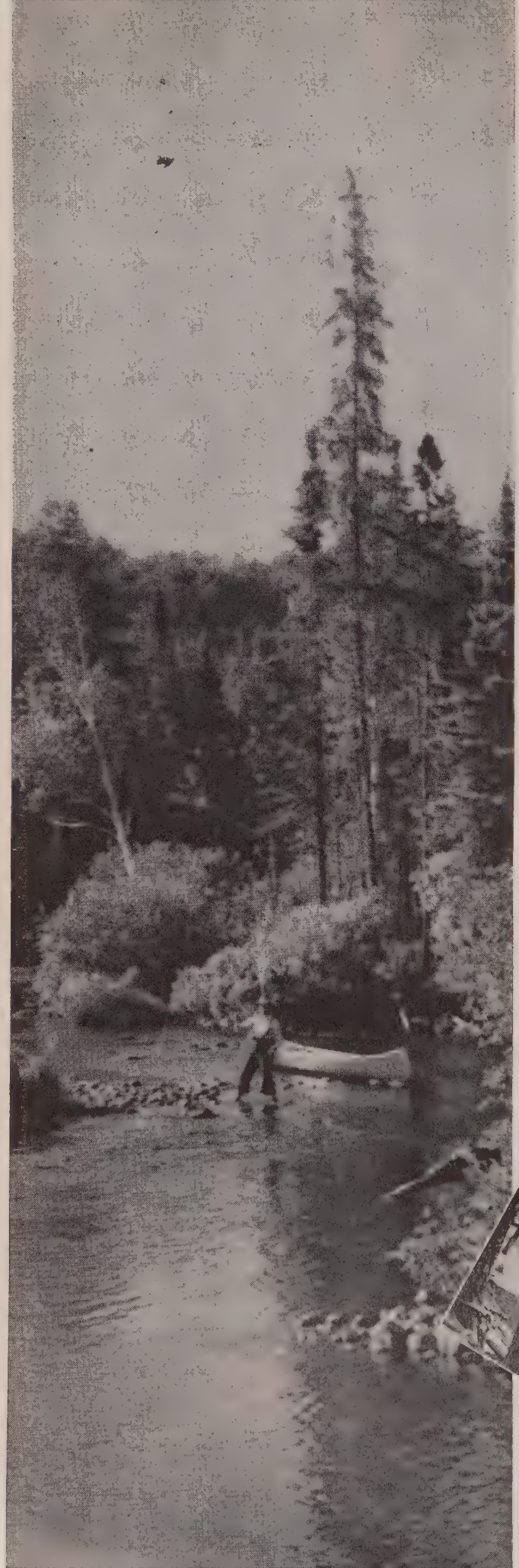
THE master of ceremonies at the Biltmore Bowl in Los Angeles, a favorite night spot for Hollywood stars, startled his audience with this announcement: "Ladies and gentlemen, Mardoni, the magician who is the star of our new show just dropped down out of the sky and will be here any minute." And he wasn't kidding even a little bit. Though no feat of magic, the truth is that Mardoni had just landed at the airport and was en route to the floor show, a few minutes late because he'd been tied up in a traffic problem over the field. But this trick wizard can claim the neat stunt of "dropping out of the sky" as part of his billing because he is the only professional magician who has his own plane. And Mardoni and his pretty wife, Louise, who is also his stage assistant and partner in a snappy mind-reading act, pile most of their stage props into a trim Fairchild monoplane and whisk back and forth across the country from city to city to keep their engagements. It's a new use for the private plane and the Great Mardoni, whose real name is Clayton Hines, has discovered that its use has saved him time and money.

"During the war," he explains, "we'd have missed out on one of the high spots of our entertainment careers if it hadn't been for our airplane. With the Fairchild and some aviation gasoline that Army Special Services officers loaned to us we were able to fly all over the country visiting various Army camps and putting on our show for the boys. We wouldn't have missed that for anything, but if it hadn't been possible to take all our equipment by air we might have been denied that privilege."

And once his agent wired him: "If you can get here tomorrow you start at the Embassy Club. Can you make it?" Mardoni was at his home in Elburn, Illinois, a good 1,800 miles from the Embassy Club in San Francisco. He looked outside and it was raining, but a check with the weatherman said he might get through okay. So he and Louise climbed into the Fairchild, winged all night through rough weather and across the lower Rockies, miles out of their way, but they got to the City of the Golden Gate in time to put on their show the next evening. "It turned out to be one of our most successful engagements, 57 weeks," Mardoni says, "and to think we'd have been out of luck except for the Fairchild. That engagement alone paid for the plane."

The same thing has happened a couple of other times which, of course, is the reason Mardoni is so sold on this business of plane travel. And unlike many plane owners, he feels that his plane is big enough and is sufficiently instrumented to permit his going through on schedule almost to the letter. "In fact," he says with his fingers crossed, "we've never missed a date yet and sometimes we wait until the last minute before taking off."

His flying business trips took him some 20,000 miles in '46 and this year it will be even more. But already airport tower (*Continued on page 50*)



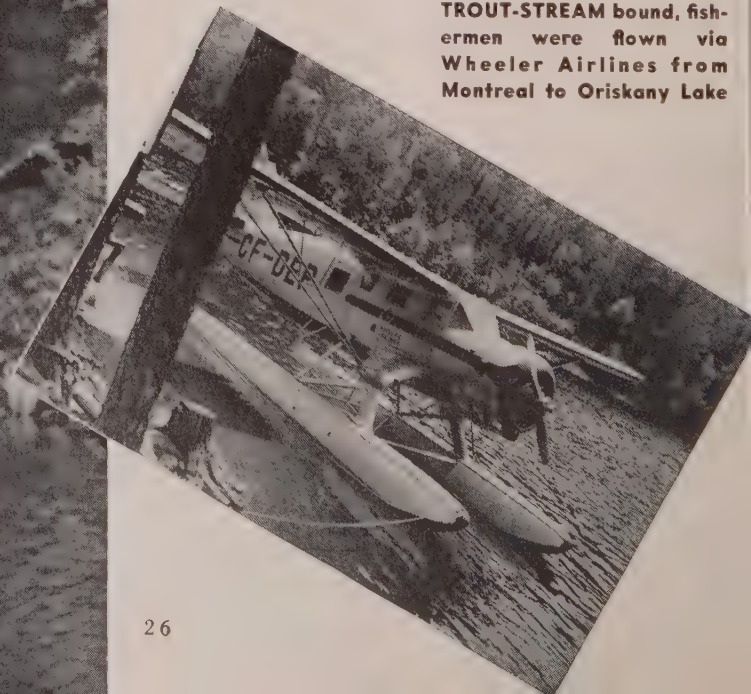
Wings North

By PERC ANGWIN

IT WAS one of those warm spring mornings just at the opening of the trout fishing season—one of those days when an angler's mind is on anything but his job—when the publisher's swivel chair suddenly swung around and I heard him say, "Perc, you're always poking off somewhere up toward the Hudson Bay country after those damned silly trout of yours. How would you like to take this trip up into the Oriskany area?"

Before I could tell him that I had been in that country—that it took two days of hard driving, a pounding over some 40-odd miles of lumber road and some tough canoe work to get there, and that he could have the trip—a telegram fluttered down on my desk. A quick glance changed my mind. Two words had silenced me—"Fly in."

Right away things took on a decidedly new slant. The message indicated that a group of newspaper men were going into that country for a full week of trout and lake fishing as guests of the paper com-



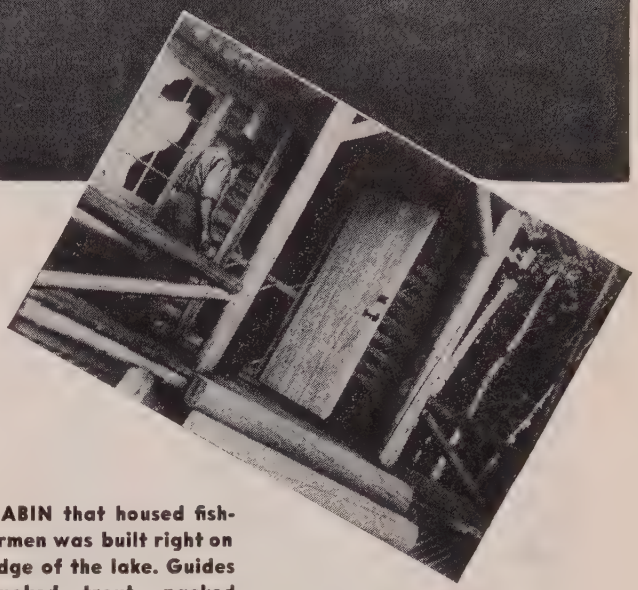
TROUT-STREAM bound, fishermen were flown via Wheeler Airlines from Montreal to Oriskany Lake

FISHERMEN were landed on Oriskany Lake in time for a couple of hours of good trout fishing before darkness

pany in control of the huge tract. It was to be an air trip all the way.

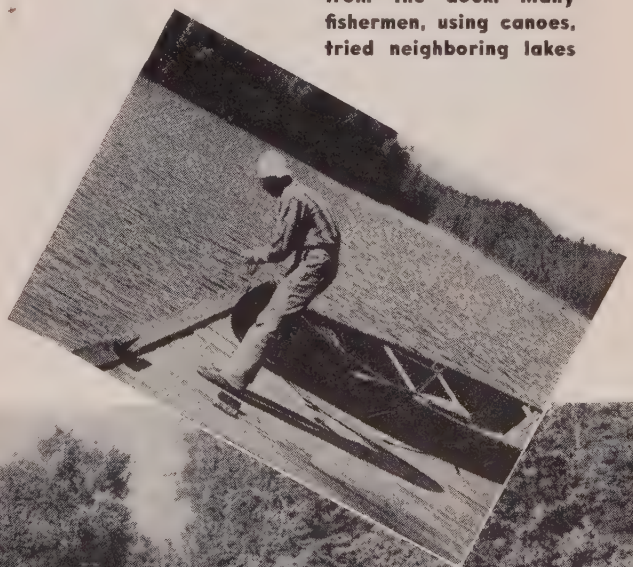
Visions started forming on the office walls—mental pictures of northern Quebec lakes to be reached without miles of sweaty climbing over steep Laurentian mountains under a galling pack, with black flies making life anything but pleasant. Mind pictures appeared of water jewels framed in jack-pines, to be reached without canoe portages. Right then I started giving thanks that a certain publisher didn't care about fishing.

And so it happened—a few days later a handful of persons gathered at a mid-Vermont airport saw a wild-eyed citizen, burdened down under a stack of rod cases and carrying only one light bag, step aboard a Northeast airliner en route to Montreal. A beautiful little hostess (looking almost as lovely as a slim speckled trout) stepped up and said, "I believe you will find your friends up front." Eight of us were to make the trip north and all were on

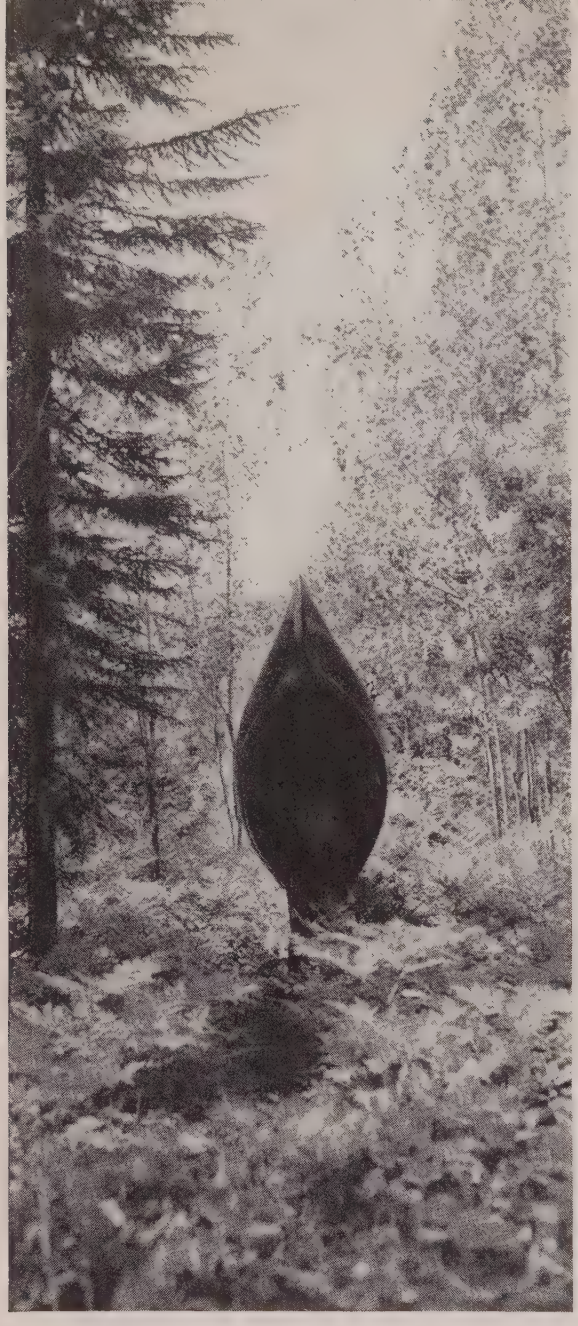


CABIN that housed fishermen was built right on edge of the lake. Guides smoked trout, packed them for the trip home

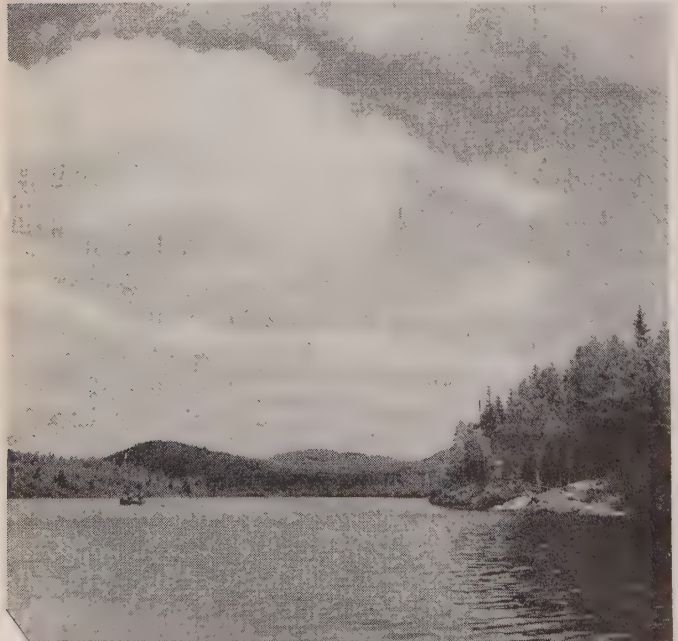
TROUT, three-pounders and up, were caught from the dock. Many fishermen, using canoes, tried neighboring lakes



STREAMS AND LAKES in Quebec abound with trout, flame-colored beauties that strike at every fly you toss at them. To this country come fishermen from all over



NEIGHBORING LAKES, reached by canoes portaged across strips of land, were as well stocked with trout as Oriskany . . . and there were seven days of fishing



board the plane—one coming all the way from Florida for the jaunt.

It was only a short time until our transport brought us down onto the runway at Montreal. Limousines whisked us on to the St. Lawrence river. There two Wheeler Airlines float ships were pulled up to a dock and veteran northland pilots were ready to help us stow our gear and get into the air.

The flat lands north of "the river"—a land of geometric little farms—slid away beneath us and we started climbing over the mountains. Those of us in the larger of the two ships looked around for the accompanying Waco but the slower plane had been left behind. Beneath us roads started petering out and wilderness and lakes supplanted the so-called marks of civilization.

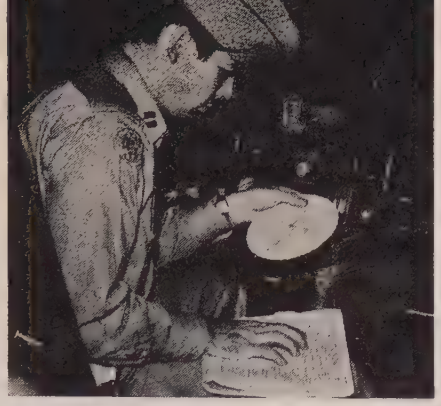
We had been in the air for only a little over an hour when we noticed a rain front building up ahead. The pilot started looking around a bit anxiously. In front of the NNE bearing on the compass the ground was being blotted out. Things were getting really thick when the pilot put the ship over a large lake. He evidently had reached a decision and down he went to a beautiful landing on a large body of water that we later learned was Lac Mondonac, normal site of an Indian encampment.

Our pilot declared he didn't like the look of things, that we would stay down until the weather ahead broke. With glasses we swept the shores of the lake looking for some sign of an Indian settlement. There was none. After an hour on the lake—and just about the time we'd decided to break out the fishing tackle for a try at some of the big trout and pike which the pilot indicated he had heard inhabited the lake—one of the boys spotted a tiny break in the clouds. It wasn't much of an opening—but it was in the right direction, and enough for our pilot.

The skipper told us there was only one more really large lake in the direction we wished to go. He could hit for it, and if things were still closed in, could set down again. It would at least bring us 30 miles nearer to Oriskany. He would try it if we wished. We wished.

Floating over the objective set-down lake we noticed that the opening was still ahead and decided to go through. Down we went to just above tree top level where the visibility was fine (and where the sightseeing for the passenger has no equal). Suddenly below us on a point in a tiny lake we spotted a gigantic bull moose. The animal was so large that he drew an approving glance from our pilot who had seen plenty of northland bulls. A few moments later another lake produced two cow moose feeding in the shallows. It was a trip to be remembered—particularly when a short time later we spotted the Waco (which had circled the storm successfully) already safely tied up at (*Continued on page 52*)

HANDY DANDY



PILOT with a Handy Dandy checks on CAR's before take-off for next airport

By TAMARA ANDREEVA

A TINY red plane banked around on the final turn and glided down on the final approach. Its sweating pilot watched the runway in awed fascination. Just one more landing, and he'd be back from that first cross-country solo! But in the back of his mind was an uneasy feeling that CAA would descend on him in wrathful phalanxes for all the regulations he could not remember well enough to do things right. He was much too absorbed to notice an angry red blinking from the Tower . . . 'til the roar of the transport's motors whipped over him, and the prop wash struck at him: he was directly in the path of an airliner. Now completely unnerved, he groundlooped the little plane. The control tower operator watching all this grimly untangled his fingers from the biscuit gun to pick up his mike—to give the airline pilot an alternate runway.

The Tower operator was Joe Clothier, current inventor of a handy gadget that will help to eliminate accidents of this sort. He realized that remembering regulations and flying techniques, watching out for other traffic—was plenty even for an old pilot. In fact, it was so much too much that Clothier decided to do something about it—at all cost.

You cannot simplify flying technique. And it is necessary to keep a sharp eye outside the cockpit so it would have to be the pilot's search for regulations that would have to be simplified. With this in mind he began a book—a very simple book—to contain ALL regulations that a pilot might need. But after toiling for several months, back and forth through pamphlets and manuals, Clothier had gotten to Chapter 4. Meanwhile he kept on seeing countless conscientious pilots walk away from their planes by the grace of some good chance, simply because they or a fellow pilot had gotten some rules confused. And, Clothier realized in dismay, that as a pilot wanders around or flies over an airport, or worse yet, stacks up over a field on instrument let down, is no time for reading a book —no matter how good. Maybe an outline was an answer. An outline on a computer, that would recall to the pilot's mind the rules that he needed to stay safe and relaxed when he needed to keep his mind on techniques, sure that he had the right rules in mind.

The result was Clothier's Handy Aid To Pilots. From it CAA regulations seem simple and logical, are remembered at a glance. Naturally, CAA officials gave Clothier's device their blessings, just as a rapidly growing number of airmen using them will.

The disk that can be (*Continued on page 66*)

INVENTOR Clothier began working on Handy Dandy in 1940. Here he shows gadget to head of firm making it

TOWER OPERATOR Clothier worked out the gadget to help himself as well as pilots eliminate traffic mishaps

Canine Canyon Duster

By HADE COLTER

WIRE-HAIRED TERRIER TAGS is not only top dog on the ground, as far as Bill Woods is concerned, but he also is "a reliable co-pilot who wants to fly all the time anytime"

Pilot's air-minded terrier, with over 900 hours in air, "co-pilots" the buzz jobs

TAGS is one of the best-known wire-haired terriers in the air-minded west. He also knows the topography of the west better than most people do. And when it comes to flying, he will outeager the most ardent beaver in the cadet corps. Right now Tags is a little over two years old, and he has more than 900 hours in his own personal log book. This time has been mostly mountain flying, charter work or student training, but he's ready for anything connected with airplanes at any time.

Tags belongs to one of the west's most daring "bush" pilots—tall, handsome, graying Bill Woods, who operates the Floating Feather Airport at Boise, Idaho, a man who has become a legend in his own time, as some few flyers seem naturally to do.

Bill keeps Tags' log book up-to-date for him, and the dog flies almost every time Bill does. Among other attributes, Tags is the only companion who wants to fly into the Idaho Primitive Area with Bill, and who does so without getting gray-haired as a result. This may be because Tags is gray already, but other testimony comes from aerobatic instructors and former G. I. war pilots who have dusted the canyon bottoms with Bill in his 450-hp Beechcraft. They say bluntly that Bill never in his life had or saw enough money to hire them to ride with him again on a canyon buzz job. This in spite of the parallel fact that the "testimony-givers" hold Bill to be one of the world's best mountain flyers. But canyon dusting is a job made-to-order for Tags. He loves it.

One of this adventurous dog's most exciting trips was a wild elk round-up in the Idaho Middle Fork country. The ranger there had built corrals to hold the wily wapiti, but they'd found it impossible to corner the elk. As a last resort, they asked Bill Woods to try it with a plane. Bill and Tags decided to give it a whirl, and they chose a Piper *Supercruiser* for the job.

In all cases such as this, Tags has his own position as co-pilot and general superintendent of operations. His spot in this ship is on the hat-throw behind the rear seat. No safety belts for him . . . he likes action in the air.

Well, they corraled the elk all right, but it took five hours of steady flying, and most of it in tight turns. Prior to this trip, Bill had been a little dubious about Tags. He'd feared that such maneuvers would make the pup air-sick. But the dog suffered no ill effects at all. In fact he did a lot better than Bill did, for at times the centrifugal force made even Bill a little buzzy. Not so, Tags!

Every time they sighted elk, Tags started barking . . . and there's nothing gentle in Tags' barks. Bill suspects that even today Tags secretly believes that the elk were successfully corraled more on the strength of his ferocious barking than on any technical skill that Bill displayed as a pilot.

It was the same with antelope. Over by Mackay and Challis Bill and Tags corraled 384 antelope in 10 days last fall. One day they corraled 184 in 22 minutes, running in two bands from a 10-mile distance in separate directions. Again Tags was as eager as Bill. When they passed stray cattle and horses in pastures he ignored them, same as Bill, but the instant they jumped a band of antelope Tags' barking joined the noise of the engine and he kept it up until the job was over.

On coyote hunting trips it's almost impossible to keep the courageous (*Continued on page 66*)

OWNER in ship. Tags sits on wing begging a ride. If engine blast knocks him off, he jumps back

"NO RIDERS" does not apply to Tags. He peers into the Beech . . . and Bill Woods has to nod "yes"

CO-PILOT position for Tags is up against the front window where he can see what's going on down below

A PILOT'S REPORT . . .

DR. DAVID LOWELL KERR is a 29-year-old Ogden, Utah flyer who had logged 49 hours and 50 minutes when he got his private pilot's license in October 1946. His first act was *not* hopping a passenger in a *Cub*. Instead, Doc flew to Salt Lake City, bargained for 30 minutes of dual in a Vultee basic trainer, shot two landings, made a 10-minute solo flight and then said, "Wrap it up. I'll buy."

Probably no other pilot has ever soloed a 450-hp plane of this weight with a total logged time of less than 52 hours. Even more probable, no one has soloed the "Vibrator" with that much total time.

But Doctor Kerr isn't any superman pilot trying to break-neck a record. He is just a private flyer who plans to own a new five-place airplane soon and who saw this as an opportunity for experience at a reasonable cost.

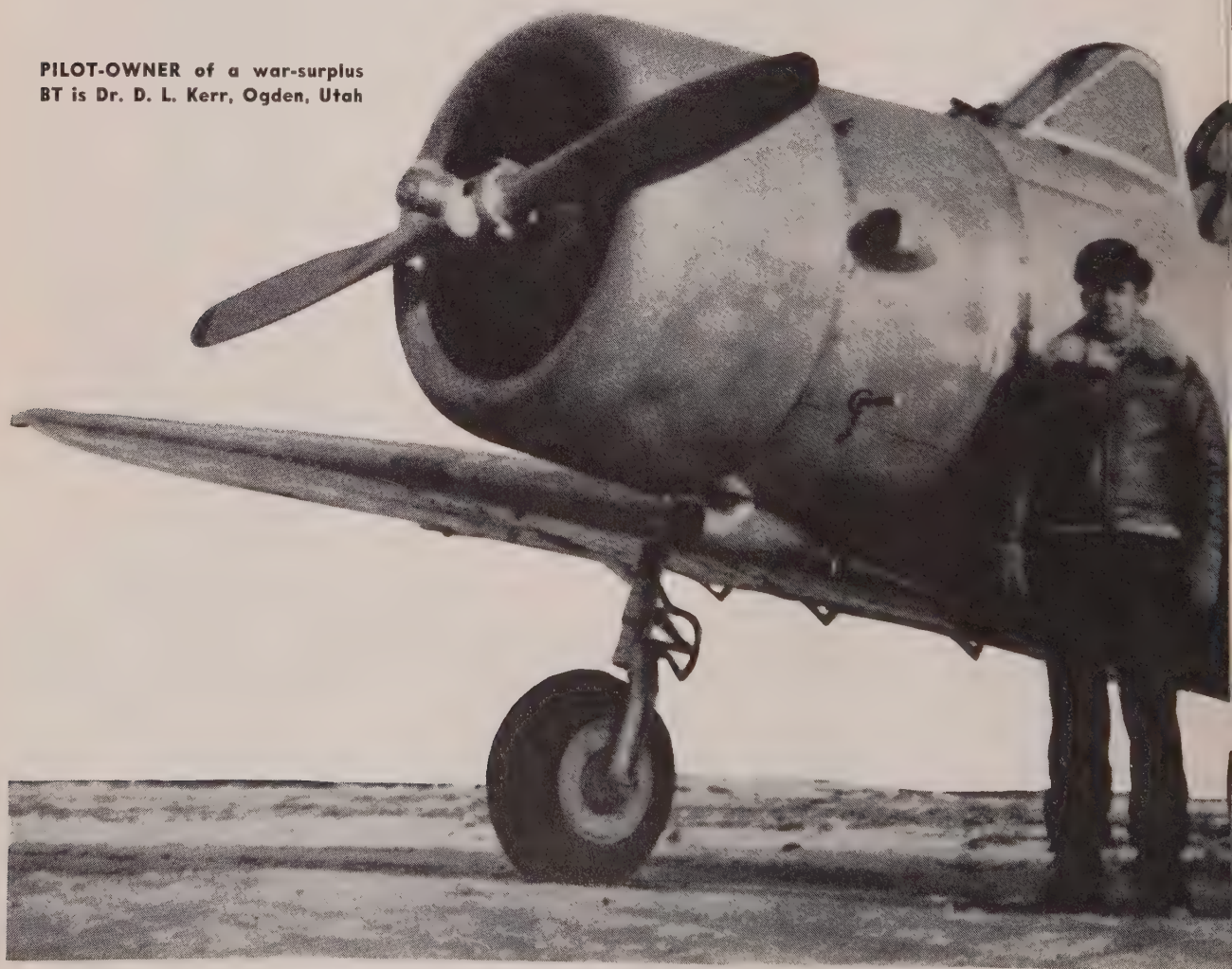
Just for the record, however, the Vultee was his ultimate goal before he knew beans about flying.

Kerr was discharged from the army in 1945 and in December decided to purchase a BT-13 or the Navy equivalent (SN-V1). So, he learned to fly.

He took his first lesson on December 20, and made his first solo on January 8, 1946, after 9 hours and 35 minutes dual in a J-3 trainer. He joined a flying club and put in 20 hours solo on a 65-hp Taylorcraft. On June 15, he "went partners" with Doctor Howard Call, another Ogden pilot, and together they bought a Ryan ST-3-KR with the 165-hp Kinner engine. They paid $1,200 cash for the licensed plane.

Then he decided to settle down and get his private ticket. A G. I. course at West-American Airways on Hinckley Field rounded out his technique and he was recommended for the flight check at 49 hours and 50 minutes . . . about average.

He was convinced all along it doesn't take the seventh son of a seventh son born under a caul to fly the military instrument trainer, a Vultee.



PILOT-OWNER of a war-surplus BT is Dr. D. L. Kerr, Ogden, Utah

VULTEE BT--13

VULTEE, used by Navy for instrument training during the war as the SN-V1, was purchased by Kerr for $1,975

By BOB ARENTZ

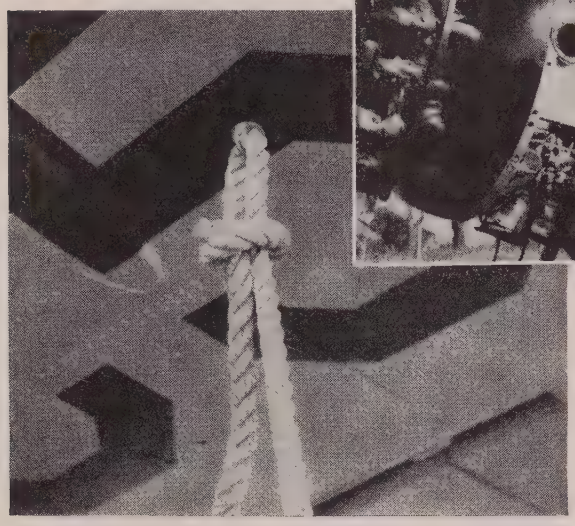
So he sold his share of the Ryan and bought an SN-V1 instrument trainer for $1,975 (with a navy S-1 seat-type parachute included). This was in October, 1946, just a month or so after he'd won his private ticket.

As an instrument trainer the ship had received excellent treatment and had a full blind group with the exception of the radio compass. It had less than 400 hours total when licensed at Reno, Nevada. This provided him with a transitional trainer having lots of dynamite and control sensitivity, and by the time he expects to get delivery on a new plane Dr. Kerr believes that his "BeeTee" experience will qualify him to fly it.

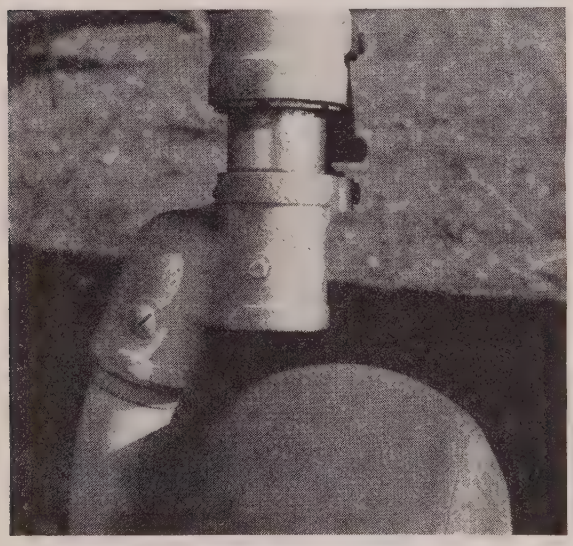
Among other projects are a commercial license and instrument rating for his own satisfaction and safety, commercial flying not intended.

Instruction is no problem to David Kerr. Ex-G. I.'s give Doc the benefit of their experience in trade for flying their wives and girl friends in the

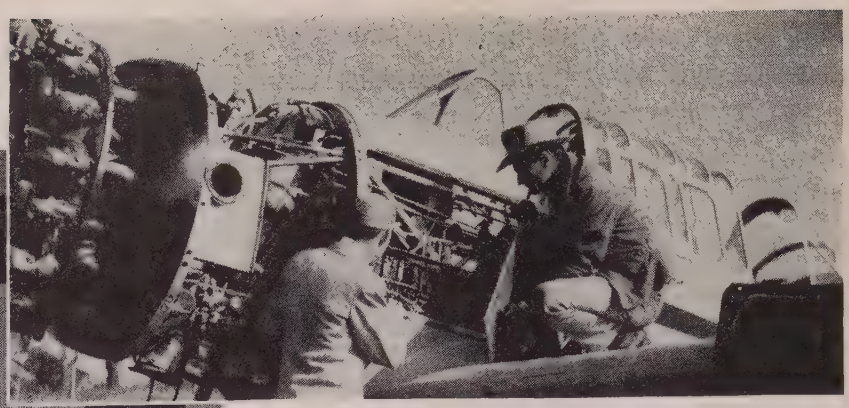
TIE-DOWN ropes for the BT-13 should be heavy and attached to dead men properly sunk in earth. Use chocks, too



SHOCK STRUT should be watched carefully. If plunger gets down within inch of wheel casting it needs fluid



WING-TIP navigation lights were flush with wing on some models. CAA requirements called for this type



RELICENSE job called for re-wiring entire electrical system with circuit breaker, re-set switch in cockpit

Vultee. (They buy their own gas, of course.)

His own experience provides him with doubts about people who have the horrors about private pilots flying this equipment.

"If you respect the airplane and treat it with the care it deserves," Doc says, "it's as easy to fly as the Ryan. For my money, easier, and we all know they soloed students at 10 hours in the Ryan."

His respect for the Vultee is not fear. If he was afraid he wouldn't be flying at all. He decided to fly the big one, and give himself the time to do so in careful steps.

He never takes chances. Why should he?

Although he had soloed the ship in Salt Lake after 30 minutes dual and two landings, Dr. Kerr got Reynold Bowden to check him out again prior to extensive solo flying.

He feels that an hour dual for five solo is called for at this stage of the game and recommends it for at least the first 20 hours on this airplane.

Daylight hasn't limited his flying and he checked out for night flying after two landings with former Army instructor Ralph Noble.

He ordinarily flies with the parachute because it makes a comfortable seat cushion, not because he expects to use it.

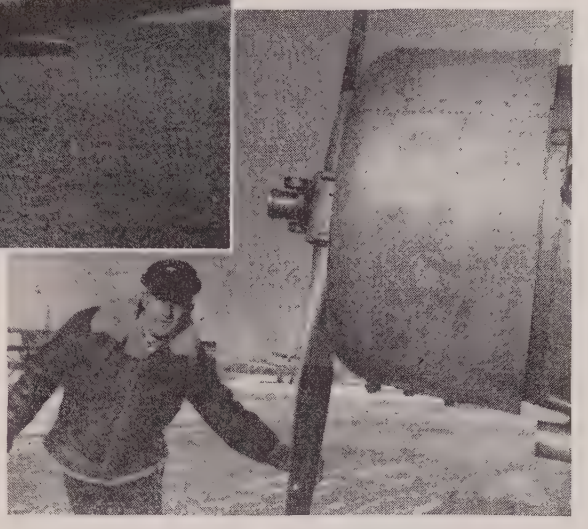
Sitting in the front cockpit of the Vultee, Dr. Kerr has a lot to look at. Most instruments are duplicated in the rear but such things as radio transmitter and receiver, the energizing solenoids, light for both panels, pressure gauges, warning lights, tank lights, mixture control safety locks, parking brakes and so forth are in front only.

This ship is all metal—what they called the "A," making it impervious to time and the elements. Built in February, 1942, it required only a minimum of alterations to meet CAA licensing regulations.

Some of the changes were alteration of radio frequency, crystal installation, placarding of cockpits, placing of re-set switches without fuses in the

ENGINE, PROP, canopy all covered over. Vultee BT-13 can sit out all winter without lots of deterioration

DR. KERR first owned a Ryan, then traded in his share and bought the BT-13 which he soloed after 30 minutes' dual



CONFUSING at first glance, longer look at ship's cockpit and panel proves them to be simply arranged

cockpits, alteration of Navy-type master switches and other electrical confusion in a ship that had proved its worth in thousands of hours of flying.

One change was lengthening the elevator trim tab by an inch or so and supplanting the proved, protected, demonstrably superior Navy-type navigation lights by makeshift CAA inferiors that stick out on the very tips of the wings where they are as prominent as sore thumbs and as liable to smashing and damage, at 10 times the normal cost of replacement because they are "CAA certificated."

This ship also has a red passing light in front on the left wing-root.

There were other changes, but mostly minor.

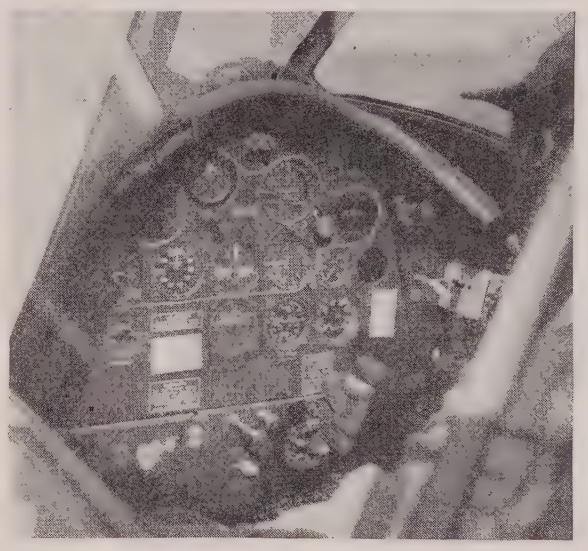
The engine is a Pratt & Whitney *Wasp* R985 rated at 450 hp. It swings a two-position Hamilton steel prop, and burns about one quart of oil per hour, normal consumption.

A good heater located between the front rudder pedals keeps the front cockpit reasonably warm and comfortable. The rear pit is something else again—strictly a long-handled proposition with fleece jackets and flying boots mandatory in winter.

In Doctor Kerr's opinion flying this airplane requires careful procedure rather than superior talents. Before starting the engine the propeller should be pulled through 15 or 20 times to clear oil from the lower cylinders.

There is a standard check-sheet for starting procedure in the cockpit, and this is worth memorizing and following to the letter regularly.

Set the parking brake, turn fuel valve to RESERVE for starting and take-off. Naturally, we assume there is plenty of gas and that oil, tires and shock struts are up. Four pounds of pressure is produced by the wobble pump and after giving the engine four shots of prime, lock the primer securely. Mixture should be forward to full-rich position and the propeller control pulled into full high-pitch setting. The master switch and both magnetos are turned on. (*Continued on page 56*)



TRIM TABS should be set in neutral before taking off and not left in full nose up position as these are shown

WEEK-END

Chicago's radio artists fly "away from it all"

SO you're too busy to go on that hunting trip? Fishing? Or golfing? Not by air you aren't. It makes no difference whether you go 90, 300 or 600 miles—you don't even need a full weekend.

In the fall, Chicago Sportscaster John Harrington can never take longer than a day and a half off at the most because his crowded football schedule invariably conflicts with the hunting season. But that doesn't deter him. He is just one of the many radio artists who are taking to the air literally. They manage to sandwich their sporting activities into crowded airwave schedules.

Baritone Russ Brown uses a Fairchild PT-19 for quick fishing trips to Minnesota with Writer-Actor Don Herbert. And Singer-Pianist Carolyn Gilbert finds an Aeronca convenient for golfing weekends.

Harrington arrived at the conviction eight years ago that "hunting is just as good in Michigan as it is in Canada," he said. "The fish weren't biting too well on Walloon Lake, at Petoskey (Mich.)," he noted, "so we decided to go up to Canada. We had just packed our gear when a young buck came down to the river to take a drink of water. I kiddingly

AERONCA, owned by Harringtons, gets them to Pellstone in six hours

RADIO ARTIST Carolyn Gilbert *(left)* and her husband fly 350 miles every summer weekend for golf. Sportscaster Harrington *(below)* flies to Michigan for hunting

SPORTSMEN

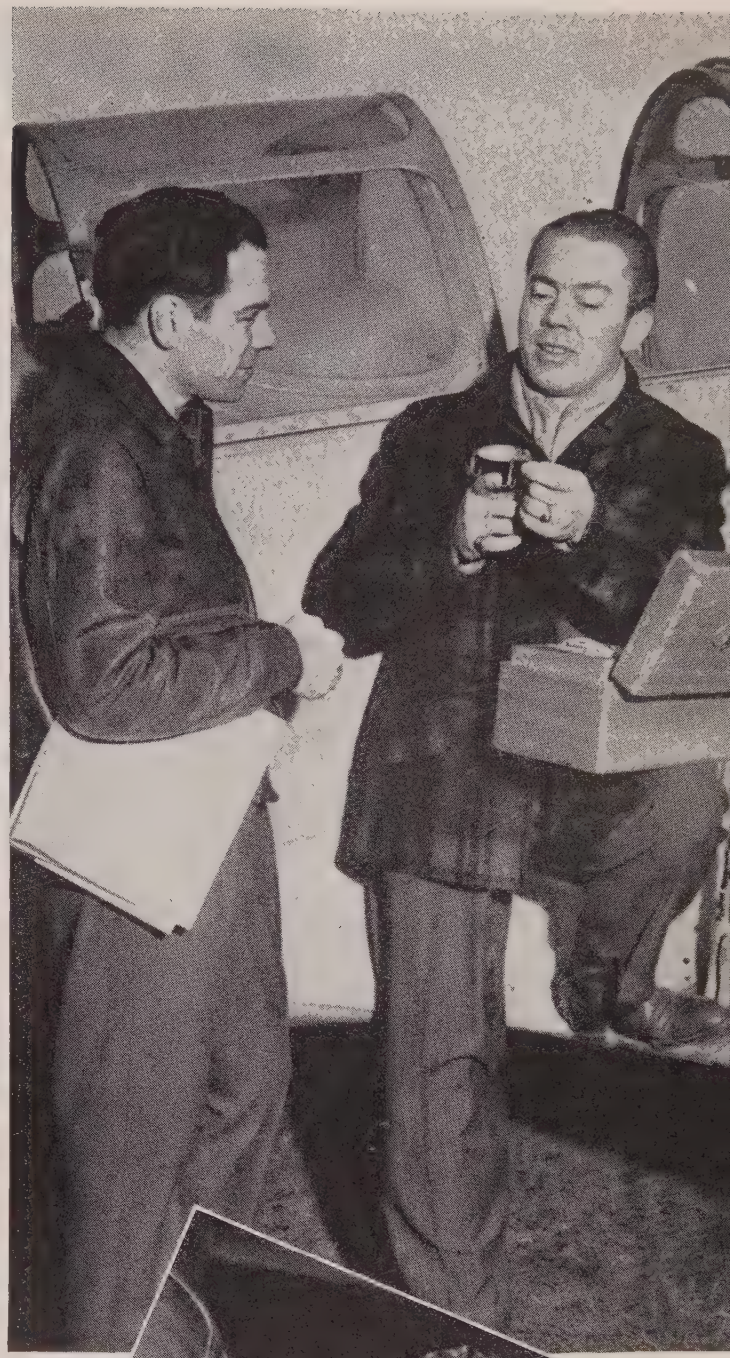
By ADELE HOSKINS

asked our guide if the hunting wasn't better than the fishing. The fishing being as good as it was, I only regarded my remark as a joke. He assured me the hunting was tops. We've gone up to Petoskey hunting each year since, the past three by air."

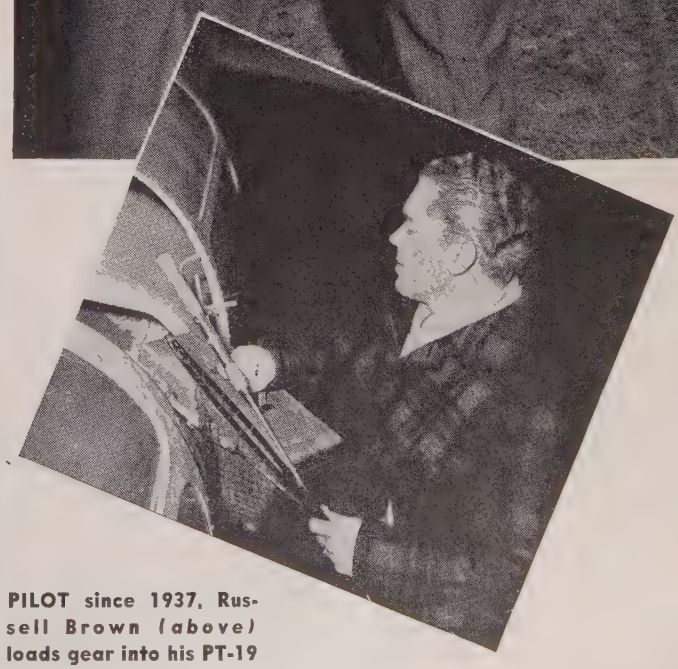
The 220-pound sports announcer flew his own Aeronca *Champion* to most of the football games he broadcast in the middle west last fall. His frame fits the cockpit like a hand in a glove. When his 110-pound wife, Betty Lou, accompanies him hunting—and she usually does—they send most of their gear by car or rail. Happily for them, they have relatives in Petoskey with whom they can leave red flannels, guns, shells, knives, *et al.*

The Stinson airport, west of Chicago, is just a convenient five-minute drive from their home in Riverside, Ill. They start out at 5 A. M. on a Sunday morning with a small duffel bag, a couple of Winchesters, compass, camera and Harrington's football binoculars. Because he has a 5 P. M. Monday broadcast, he always plans to be home by 3 P. M. of that day.

In their lightplane, they (*Continued on page 58*)



ACTOR-WRITER Don Herbert and Singer Russ Brown use Brown's PT-19 to get them to their Minnesota fishing spots. Herbert *(left)* was *Liberator* pilot AAF



PILOT since 1937, Russell Brown *(above)* loads gear into his PT-19

Getting Along in Traffic

Life in a traffic pattern can be complex when the planes are many and range from very fast to slow

ON a day when the wind is just right and the sun is bright, you—and darned near everyone else—decide to dash out to the airport and get in a little flying. This unity of action on the part of you and your fellow flyers adds up to one thing—a busy airport, a field that's really jumpin' on the taxi strips, the runways, in the air and all around. And, to make things really difficult, the crowd is

made up of all sizes and shapes of aircraft humming along at all stages of travel from very slow to very fast. What seemed like a good idea earlier now more closely resembles pandemonium.

A pilot friend of the author's the other day mentioned his confusion when confronted with this heavy traffic over the airport. The predicament in which that pilot found himself seemed ordinary enough to the writer. After a moment's reflection, it occurred to me that maybe Mister Confused had something after all. We'll try to un-confuse him.

Briefly, a traffic pattern is just what the name implies—a pattern to be followed in taking off and landing airplanes. Just as there is a pattern for automobile traffic in a city so is there a pattern for aircraft traffic (both on the ground and in the air) at an airport. In this instance, however, we are mainly concerned with rectangular traffic patterns in the air as they apply to take-offs and landings, not to taxiing maneuvers on the ground.

Each airport has its own traffic-pattern set-up, and it would do well for the cross-country pilot to know the traffic patterns of the various airports he may be going into on his trip before he even starts out. This information can be gotten from Airman's Guide or, if the fields in question are within a comparatively few miles of each other, the manager of one airport probably knows the traffic pattern of the next airport down the line. Ask him and he'll give you all the dope you'll need. In most cases, though, you'll find that the traffic pattern both for take-offs and landings is rectangular and counter-clockwise . . . to the left, in other words.

This means that in taking off from a small field, you will climb straight-away (upwind) to an altitude of 400 feet, then make a 90-degree to the left. When your plane has reached an altitude of 500 feet on the crosswind leg, you will leave the traffic pattern at a 45-degree angle to the right (see illustration), climb to your chosen altitude and fly merrily on your way to wherever you're going.

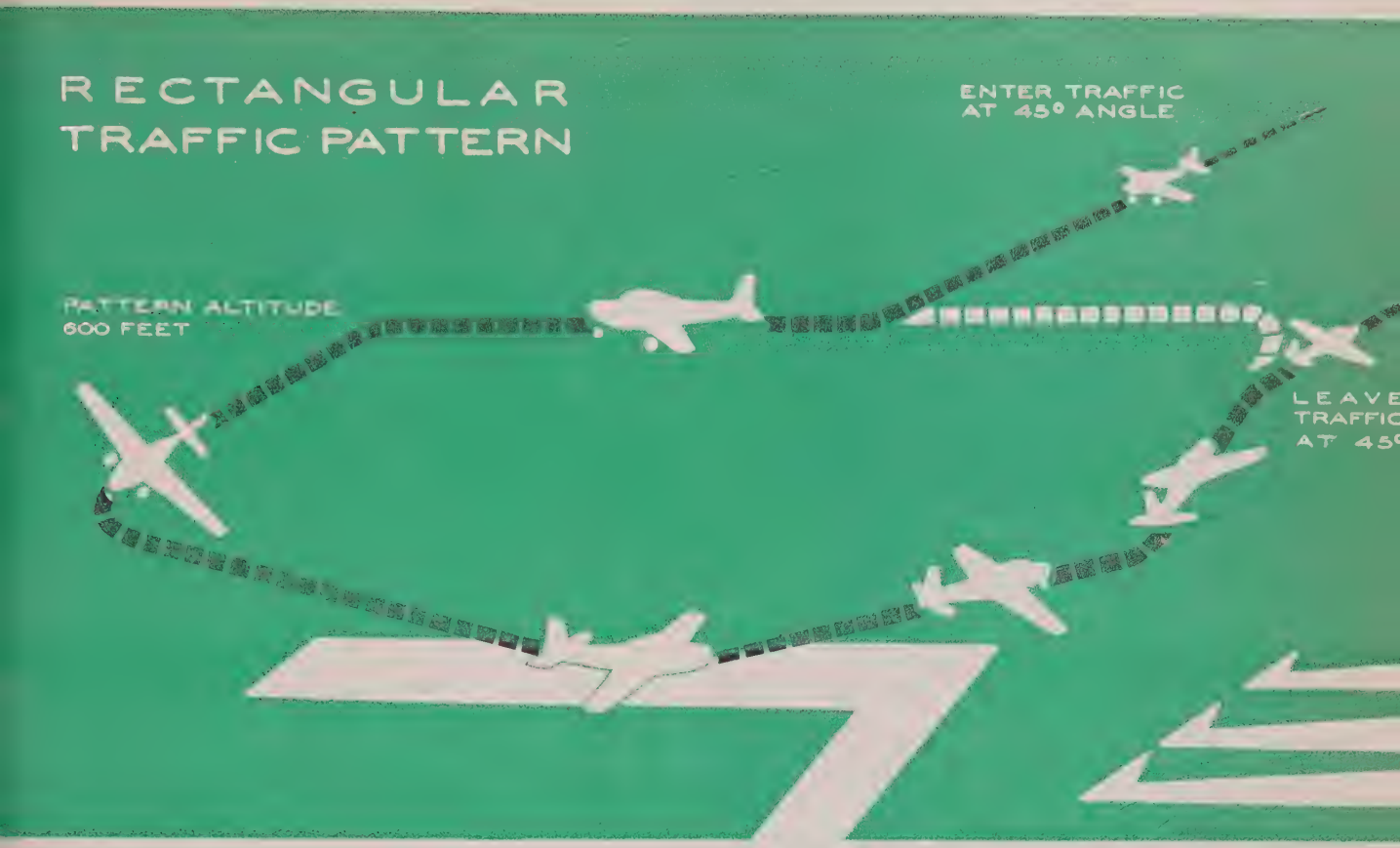
On landing via a left-hand traffic pattern, you will enter the traffic pattern at a 45-degree angle at an altitude of 600 feet on the downwind leg of the rectangular pattern (see illustration). Make a 90-degree turn onto your base leg, and with throttle retarded, lose the necessary altitude then a 90-degree gliding turn onto your final approach, lined up with the runway, and . . . down you are.

All of this sounds very fundamental . . . and it is. But when the traffic is heavy and the field has a control tower, it becomes more complex. And that's where Mister Confused has every reason to be confused . . . until he learns and understands the how's and why's of traffic.

One very plausible problem that might bother a novice airman who is at the controls of an airplane faster than the usual trainers is how to keep in the field's traffic pattern . . . how to hold your position

By GENE LANDMAN

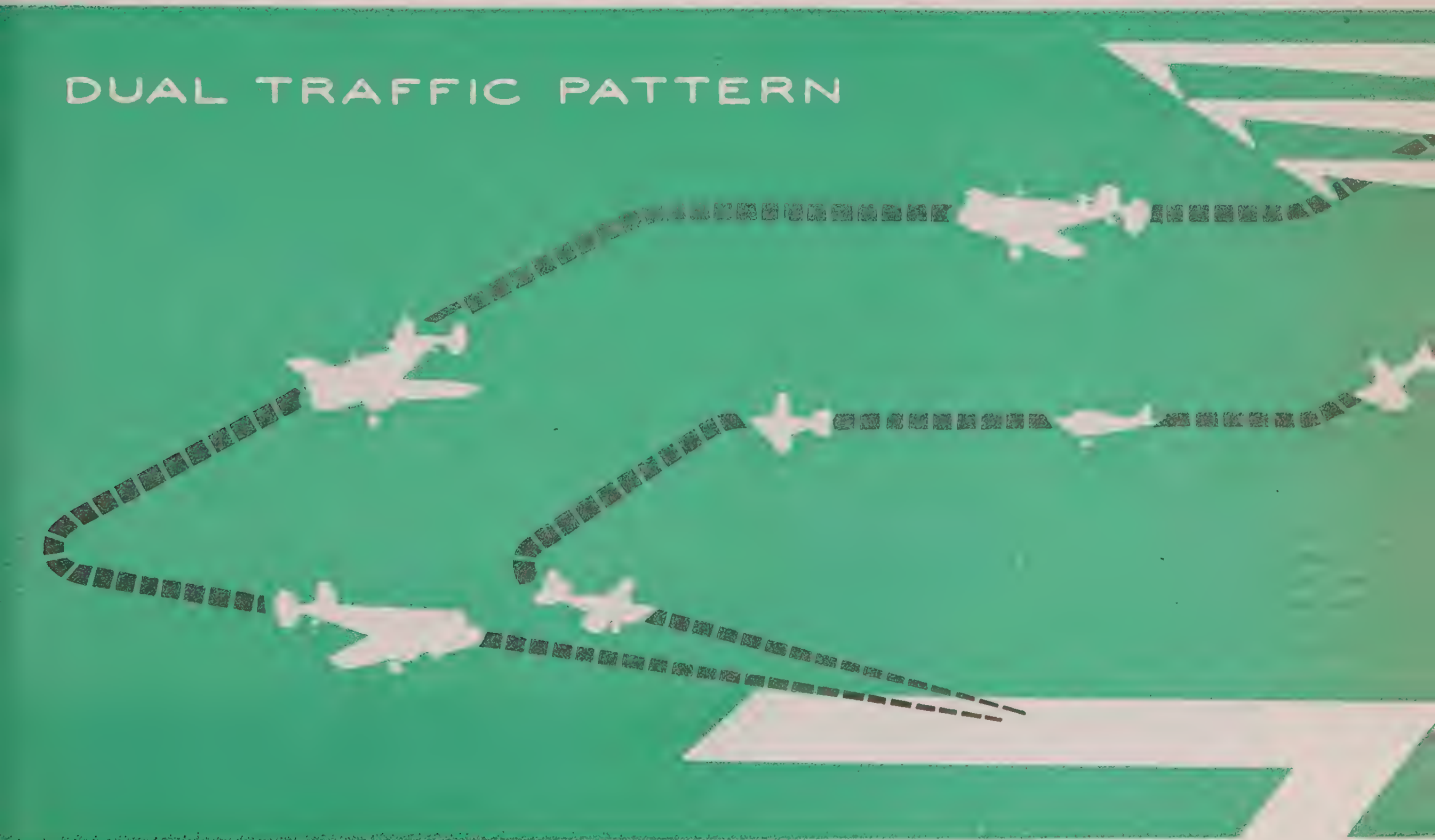
RECTANGULAR TRAFFIC PATTERN



COMING IN to land, planes fly course as above. From 45° entry leg planes enter downwind leg, turn 90° onto base leg, turn 90° on final approach for landing glide. After takeoff planes leaving pattern make 45° turn out

AT AIRPORTS where both multi-engine ships and personal planes use same runways, the larger faster ships fly patterns that are higher and wider—taking turns using the runway. Usually small planes can land beside runway

DUAL TRAFFIC PATTERN



CONTROL TOWERS dot many airports. From their deck pilots get green "go ahead" or red "stop" signals

in it . . . when you, in the faster plane, are behind another pilot who is flying a much slower airplane. Logically, you might conclude that you'd not only catch up with the slower aircraft but would actually pass it. The answer to that is that you, in the faster ship, will fly a larger pattern, i.e., a wider and longer downwind leg, hence a base leg farther out and a longer final approach to the field. Never will you fly directly behind the 65-hp and slower airplane, but always you will fly alongside of it. (See illustration.) The multi-engine boys get into the traffic pattern at an altitude of 1500 feet instead of 800 or 600 feet. Thus flying a higher pattern as well as one having wider and longer legs.

If you're in the slower airplane, don't worry too much about the fellow in the faster ship, except that you must keep your eye on him. Don't lose him and then just hope he's not cutting you out of the traffic pattern. In all probabilities, he is "gaiting" his speed to yours, and will come into the field after you're down. But to be certain, be an alert pilot and know where he is at all times. Look around. Don't just trust to luck.

Most of the very busy fields today have control towers and traffic control officers. It's the job of the fellow in the tower to direct the traffic of the airport, and where radio is not used, the tower man transmits visual signals to the man in the cockpit via biscuit-gun light. While it's the job of the tower man to signal you in the airplane, it's your job to watch out for his signals and to follow them.

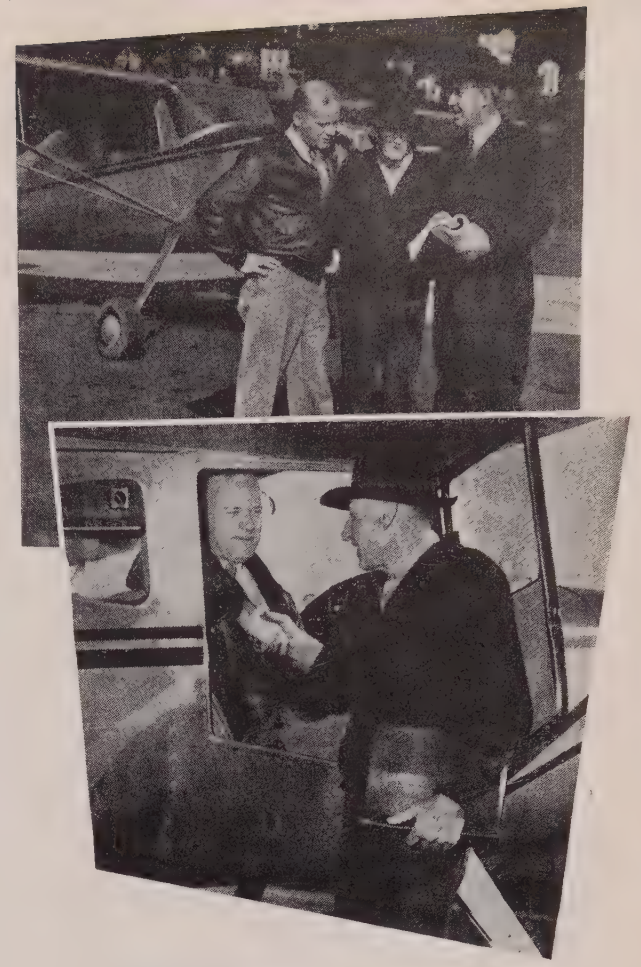
If he flashes you a green light, that's his sign that its okay for you to come on in; if he gives you a red light, it's an order for you to pull up and go around again, to give way to other aircraft. No traffic control operator is going to give you a red light unless he has a good reason for doing so . . . and so don't doubt his judgment. A fellow pilot may be having to make an emergency landing. Help him out—and yourself, too—by keeping out of his way.

Another reason a tower operator might give you a red light (a "pull-up and go 'round again") is that another plane is taking off from the runway you want to come in on. If such is the case, don't pull up and fly a straight course in a normal climb. If you do, this will carry you right over the runway. *And* if the plane taking off is faster than your ship, by the time both of you have reached the airport boundary, one of you will be flying piggyback . . . and airplanes weren't designed for that type of operation. Instead, start climbing right away, but at the same time bank gently to one side of the runway. Then climb to traffic altitude alongside of the runway. This way you can keep your eye on the ship taking off and incidentally . . . the pilot in the other plane can keep better track of you. (*Continued on page 69*)

Aero-Lineman

FOUR HUNDRED and fifty miles of high-voltage electric line is a lot o' line . . . particularly to the guy who has to watch over it via car, horseback or on foot. All this line, property of the Cincinnati Gas & Electric Company, *was* more than a mere headache to its overseers. Yes, it *was* . . . today, it's a cinch. Now patrolled by plane, a Cessna 140 out of the Cincinnati Air Activities hangar, those 450 miles of transmission line are given a thorough check in just five hours. And it used to take at least a month! The once tedious job is now a lot of fun to the linemen, and it means a great deal to current users, too. The airplane patrol reduces the amount of time required to detect failures, thereby enabling the lineman to make speedier reports and to almost cancel out interruption of service.

The experimental work on plane patrol of lines was done by veteran lineman William Winters and general foreman Guy Richardson. Their pilot was George Hoffmeister, an AAF Captain during World War II. They pronounced it "highly successful."



PREFLIGHT BRIEFING was given Pilot Hoffmeister *(in leather jacket)* and Patrolman Winters by company's General Foreman

STEEL TOWERS and wood poles, 450 miles of them, carrying lines of 66,000 and 132,000 volts were thoroughly checked in just five hours' flying time. Using a Cessna, the men did the job that formerly took a month by car

Movieland Airport

Clover Field tops many in its appeal to the personal pilot

SANTA MONICA'S Clover Field is a favorite airport of movieland pilots and plane owners

TODAY'S PLANS call for improvements to field. New runways, buildings are being added

FIELD was used, during the war, by Douglas Aircraft. Army built the long runway

According to the advertisements, there's always one character who doesn't read the Philadelphia *Bulletin*, but it would be hard to find one Santa Monican who doesn't fly, or take a keen interest in its soon-to-be model airport. In Santa Monica, California, *everybody* goes to Clover Field.

Genial Mayor Ray Schafer and his pretty daughter, Helen, are out every morning at 7:30 for that hour in a Cessna, and 9 A.M. finds the Mayor at his desk in city hall, rarin' to go after an early whirl around the cumulus. From then on, except when a typical Santa Monica fog bank rolls in, the field buzzes with activity that adds up to some 3,500 landings and take-offs a month (417 last Thanksgiving Day—a record). About 50 a month are Army and Navy, 500 civil itinerants, and the rest local small planes.

Resident celebrities, such as plane-owners Tyrone Power, Allan Jones, Douglas Shearer and David Hearst (son of William Randolph), add glamour to hangar flying at Clover. Jimmy Dunn, Robert Young, Norma Shearer's husband, Martin Arrouge, Claudette Colbert's spouse, Joel Pressman, and numerous directors, screen writers and radio producers hang around the administration building arguing about cross-wind landings and front slips.

Jon Hall and Frances Langford are in the flying business up to their famous necks, selling *Ercoupes* and accessories, and waiting for the day when their swanky Cloverleaf Flying Country Club begins to

take shape in the northwest corner of the field. The club, with membership by invitation only, will feature dining rooms, overnight facilities, swimming pool, lounge and bar, as well as everything needed for the care and feeding of aircraft.

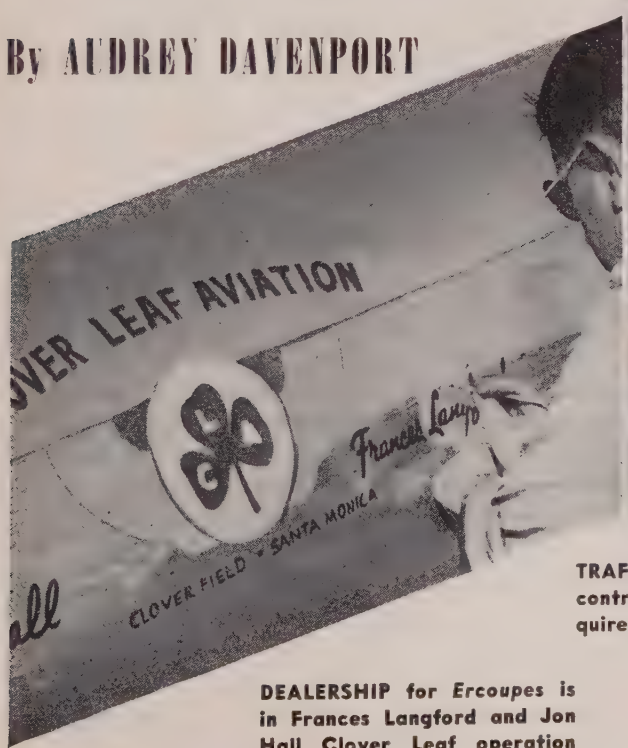
Most small airfields grow with Topsy-like abandon, expanding in haphazard fashion as money is available. But Clover Field, started in 1920 when World War I *Jennies* were the smartest thing in aircraft, and grown to maturity when Douglas Aircraft and the Army moved in in 1940, is—or soon will be—all that an air-minded city of 75,000 could ask for. It isn't yet the "private pilot's dream castle" described by its architects—but just give it time!

Before the war, a single runway handled about 4,000 take-offs and landings a month. Douglas moved in and used the runway for testing, but most of the traffic was in small aircraft. Civilian flying was moved off the field late in 1940 for the then-preparedness program, expansion of Douglas, and Army activity. Douglas assumed cost of runway maintenance and tower operation; the Army expanded the large runway and put in an angling strip for the sure-to-turn-up crosswinds.

Most Santa Monicans resigned themselves to no flying for the duration—but one man kept on dreaming, and put his dreams on paper. Airport manager Vern Tyler, who stayed on to take charge for the Army during the war years, envisioned a sky black with private aircraft when bombers no longer had first priority, and that dream isn't too far from becoming reality very, very soon.

Tyler started flying in (*Continued on page 74*)

By AUDREY DAVENPORT



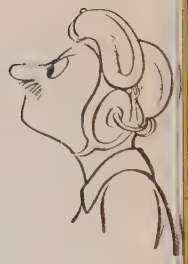
DEALERSHIP for *Ercoupes* is in Frances Langford and Jon Hall Clover Leaf operation

MAYOR Schafer and his daughter go out to Clover Field every morning to fly

CLOVER LEAF Flying Country Club is being built on the field by "Jon and Frances"

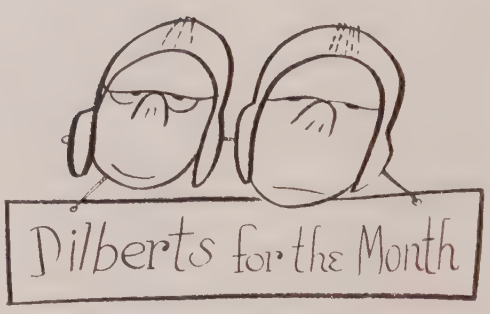
TRAFFIC at field is all tower controlled; every ship is required to have two-way radio

DILBERT



By S H Warner and Robert C. Osborn

All On One Flight— It began innocently enough. Two aviators simply decided to go on a cross-country hop. Since one of them owned a slick two-place job, they were soon taking off under CFR (Contact Flight Regs.) clearance.



Hang one on the guys that do it wrong

All went well until they ran into heavy weather 18 miles past their first contact point. Contrary to regulations and despite the fact that they were in mountainous country, they pushed on. Two hours and many close calls later, they found a small airport where they could land. This was 110 miles beyond their destination.

Believe it or not, 10 minutes after landing, these friends-for-punishment were in the air again, headed right back through the same stuff. Only it was worse now; raining. But there was a railroad handy, so they hugged the track. Fortunately, it didn't go through a tunnel. Finally, with fuel almost exhausted, they landed in a cleared—or rather, a partly cleared area. They hit a small rock—small, but large enough! Final result: two mentally and physically bruised morons with one airplane less.

This "stupid exhibition" is eloquent proof that the safest aviator isn't always the one with the most flight time. These two pilots had a combined total of 3,700 hours. It was brought out at their investigation that they had violated the following-named regulations and safe-flight procedures:

1. Failed to check radio prior to take off. There was no radio contact during the entire flight.
2. Violated CAA procedures in letting down cross airways under marginal weather conditions.
3. Upon encountering instrument conditions failed to return 18 miles to known clear area.
4. Continued into unfamiliar mountain country under instrument conditions, without clearance or radio contact.
5. Made no effort to obtain weather information at point of first landing.
6. Also neglected to replenish fuel supply there.
7. Failed again to check radio at that field.
8. Failed to notify departure and destination points of any changes in flight plan.
9. Showed total lack of (*Continued on page 68*)

The Dilberts scream, "Not MY Fault . . . just a no-good plane . . . it pushed me!"

For a quick look, the late Dilbert let down another 50 . . . and got hooked

Forestry Air Force

(*Continued from page 29*)

fly—better known as the horse fly—damages livestock and reduces milk production yearly in excess of $100,000,000.

Over 360,000 acres of woodland in Idaho are bare from the ravages of the Tussock moth, which has a particularly acute taste for fir and pine trees.

This summer, in the largest single spray job attempted by the department, a C-47 or some similar twin-engined plane, with about 1,000 gallons of spray capacity, will be chartered to treat as much of the State's wooded areas as possible.

The planes will start their attack this spring in whichever section of the country is undergoing the greatest invasion from the insect enemy. The 15 government planes will be augmented by as many chartered ships as funds will allow, plus those operated by State agricultural and forestry commissions.

If, for example, it's the pink bollworm in Texas which is making a mass frontal assault on our southern cotton fields, general headquarters in Washington will flash the word to all bases to send planes to Texas.

If, next, the spruce bug worm starts mass mayhem in Northern forests, an S O S will be sent the pilots battling the bollworm in Texas—assuming Mr. Bollworm is groggy by now—to fly north post haste to meet the new onslaught.

Bases for this fleet are at Beltsville, Md., where the Department of Agriculture maintains its huge Experimental Stations; Greenfield, Mass., Harlingen, Texas, Gulfport, Miss., and Orlando, Fla. Others doubtlessly will be established as the fleet grows in numbers.

The aircraft themselves are mostly biplanes. Those which were not purchased from surplus governmental stores last year are venerable crates, reminiscent of the barnstorming era. They are not judged by classiness of appearance or "hotness," but by their required qualities of "low-and-slow" flying.

Several of them are former 'Yellow Perils," familiar to every Navy pilot of this past war In them he learned his ABC's of flying.

Chief pilot of these blitz buggies of bugdom is Don Whittam, who did his aerial undergraduate work as a barnstormer and then skywriter.

A man who does not mind long nerve-wracking hours of flying 15 feet above tree tops and fence posts, and hedge hopping houses, barns and telegraph poles, he agrees with officials of the Department of Agriculture that pilots with similar constitutions and inclinations are not easy to find.

Several pilots with long and outstanding records as wartime flyers got something closely approaching the screaming meemies after a few bug dusting missions last summer and were only too happy to call quits.

It's one thing to fly at the relative ease and safety of four or eight thousand feet, with instruments to do a great share of your thinking for you—but quite another to skim over the corn stalks.

Best pilots for this work are either veteran barnstormers or former AAF pilots of light artillery spotting planes.

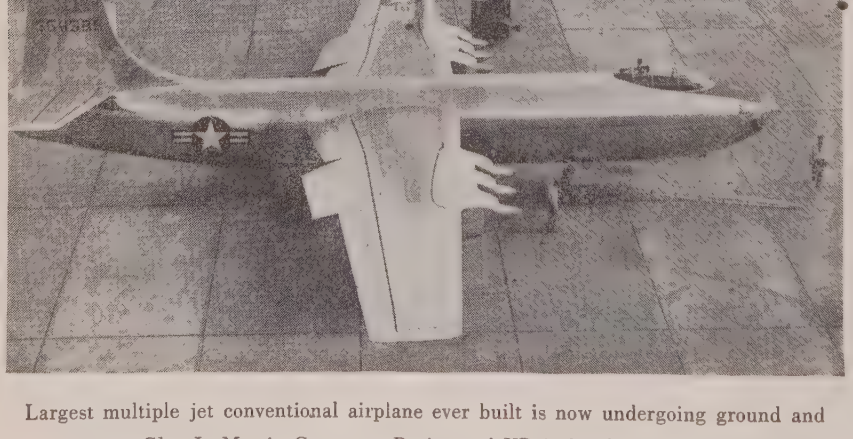
Modest as this new fleet of the Agriculture Department is, it portends greater things to come—a literal air revolution in the department's methods of insect control and general crop survey work.

The Interior Department, with its slightly larger air force, will be concerned with wildlife census and protection.

Its concepts of the uses to which planes can be put for both greater efficiency and economy are perhaps even newer than those of the Agriculture Department, which in varying degrees has used planes for a number of years.

Officials of this large government department, who acquired their fleet only last year —also from war surplus stock, say they are still in the process of formulating plans and are reluctant to talk. However, something is known of the work which they are doing. . .

MARTIN XB-48 COMES OUT OF ITS COCOON



Largest multiple jet conventional airplane ever built is now undergoing ground and taxi tests at Glen L. Martin Company. Designated XB-48 by the AAF, for whom the big ship was built, it is powered by six jets and is classified as high-speed bomber

Actually, the program began in Jan
when the Fish and Wildlife Service of
department completed a nationwide wa
fowl survey.

Aided by Army, Navy and Coast Gu
planes, and even blimps from the Naval
Station at Lakehurst, N. J., the departm
made a count of ducks, geese, and o
water birds along the east, west, and g
coasts, and in the Sacramento, Imperial,
San Joaquin Valleys in California.

The count, which began after the close
the hunting season, was necessary in or
to determine how plentiful waterfowl will
during next year's hunting season. The
sults probably will not be known for so
time yet—when the vast amount of ph
graphs, maps, and charts are correlated
Washington.

The aerial observers and photograph
were aided by a total ground force of 3,
men, who were directed in some instances
radio from the planes and blimps.

At the same time, particularly in s
large duck and geese wintering grounds
the Narragansett and Chesapeake bay are
pilots were able to flash the word to ga
wardens of illegal trapping of birds. This
easy to spot from the air, but very diffic
from a boat.

The most detailed survey was made
Colorado, where Army planes from Lo
Field made a continuous roll film of all
waterfowl habitats in the State. A regio
Fish and Wildlife Laboratory in that St
was scheduled to undertake the rather s
pendous task of counting every dot—p
sumably some species of water birds—on
film.

The procedure followed in other areas
to calculate quantity of waterfowl in vari
wintering grounds simply by assuming th
was one duck for every square yard of mar
land or water.

During the summer a further check on
abundance of waterfowl will be made
breeding grounds in Canada and Alas
Last year a total of 15,000 miles were flo
in this area for such an inventory.

Another use for the department's pla
will be to "herd" the birds away from priv
property. Migratory birds which can take
tremendous toll of our Southern rice fie
will be shooed to other grounds by pla
coming in low and "buzzing" them.

State aviation activities have in the pa
in such Western States as Texas, Wyomi
Arizona, New Mexico, and Colorado,
tempted "antelope trapping" by air.

It has been necessary each year to cor
antelope herds into pens for marking, cou
ing, and redistributing among the Sta
Formerly men on horses had to do this l
and rather tedious job. Then someone
covered that antelopes are very whimsi
and curious animals and will run at spe
approaching 50 mph beside and below a l
flying plane. Furthermore, they will foll
wherever the plane leads them.

Planes, equipped for the most part w
pontoons, last year started a census of saln
coming up the rivers of Alaska. Althou
salmon cannot be counted, even as dots,
was found that aerial photography and
servation afforded a good measure of
salmon's relative abundance.

The experiment proved so efficient
economical that airplanes have been adop

(*Continued on page 52*)

This lumber camp operator uses his Stinson Voyager, equipped with floats, to fly in food, equipment parts, and other vital supplies.

Here's America's most useful plane... the great new Stinson Voyager...now available on floats!

LONG FAMED as America's most *useful* personal plane, the 4-place Stinson Voyager is now available with floats, as well as conventional landing gear, to provide even greater utility.

When you fly a Voyager with floats, you don't have to depend on normal airport facilities. Any lake, sheltered bay or sound becomes your "landing strip."

You'll find, too, that this "fly-anywhere" plane, equipped with floats, loses none of its renowned dependability, its easy-to-fly characteristics, its inherent stability.

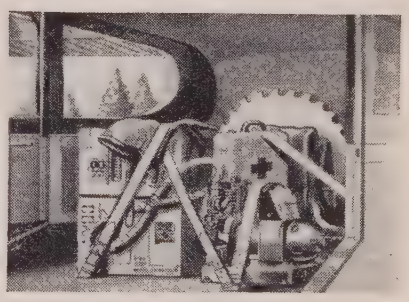
The Stinson Voyager, when equipped with floats, carries a useful load of 763 lbs. at a cruising speed of 114 m.p.h. It will actually pay for itself in the variety of useful jobs it performs. And for vacations, hunting and fishing trips, it offers you and your family comfort, roominess, and plenty of space for all the duffle you want to take along.

Flaps permit quick take-offs and slow, short landings . . . built-in wing slots for safety. Inherently spin-resistant. Two-way radio with dome loud-speaker. Landing and navigation lights. Soundproofed cabin has controlled ventilation.

FREE — 20-page, full-color catalog!
See the new Voyager at your Stinson dealer's. In the meantime, write for 20-page brochure, beautifully illustrated in full color, giving complete description of the Voyager's many features. Stinson Division, Consolidated Vultee Aircraft Corporation, Dept. C, Wayne, Michigan.

Stinson

FOR 21 YEARS—AMERICA'S MOST USEFUL PERSONAL PLANES



The Stinson Flying Station Wagon!
America's first personal "cargo" plane. Reinforced cargo compartment (24 cu. ft.) in 2-tone plywood paneling with tie-down straps. Side-loading baggage compartment offers an additional 11 cubic feet of carrying space.

Load capacity on floats: Pilot, full gas tanks (40 gallons), and 350 cargo lbs. The two rear seats can be replaced in 5 minutes.

Keep It Like New

(*Continued from page* 23)

per hour with no more work from the engine.

While we're on the subject of wax and paint for fabric-covered aircraft, here are a few pointers about painting that insignia, pin-up gal or name on the nose of your ship. Ordinary oil paint obtainable at art, stationery and some hardware stores will do the trick. Fabric coverings will take it as long as you don't put dope *over* the paint. Enamel or oil paints seem to go on doped-fabric okay, but lacquer does not stick to enamel. Sure, you can try putting dope over it but you'll find it will cause the oil paint to curl and flake off. So paint your "one and only" on your ship but don't dope her afterwards.

If you are the kind of chap who got tired of polishing his bike after a few days, you can save yourself a lot of work by taking it easy when you taxi. If your car was covered with fabric instead of a steel body, you'd think twice before you ripped through a mud hole or a stretch of gravel road. Well, when you're on the ground with a plane, give it that same consideration. You have a prop up front just itching to pelt the fabric with pebbles, sand or mud.

Before each flight check the wings for stone bruises, particularly the leading edges. This goes for the horizontal stabilizers too. The latter are right in line to be smacked by pebbles and dirt from the tires as well as from the prop, so check them well. It pays to catch these bruises early, thereby saving yourself from a bigger repair job later on.

Here's another thing pilots might bear in mind—if you have sweaty hands (student pilots in particular take note for I still remember mine), it's best to keep your clammy mitts off the fabric as much as possible. Perspiration may be either salty or acid and as a result it will start "ring worms" and cracks. If you must lean on a bar wait until you get back in town where you can do so without damaging the fixtures.

Sometimes, despite lots of care and consideration, the fabric gets a bad crack or a small tear. If it's small you may repair it yourself without calling in an A & E mechanic to do it for you. If it requires a recovering job of any major component part, however, you *must* have the boy with the proper CAA ticket do it for you. It's the law.

Let's say it's a small tear, straight line or one of those familiar L-shaped affairs. Fabric as you know, is a special cotton cloth, finally woven of long fibre staple cotton. It is always placed on the wing or fuselage with the long tough threads running parallel to the air flow, and the weaker "filler" threads at right angles to this flow. This applies to patches also. Clean the area around the tear by washing with dope thinner or acetone to soften any wax, oil, grease or varnish. The mushy film is then removed by careful scraping with a dull putty knife or similar tool. If the hole is a bad one, the edges should be stitched with a cross-over baseball stitch, to hold it together when the patch is applied and to prevent its opening under the pressure of applying the patch and dope later on.

The patch should be sufficiently large to extend at least one inch beyond the tear in all directions. Before applying, the edges of the patch should be "pinked" all around to avoid a straight line ridge under the new dope and to prevent peeling and tearing. Dope should be applied to both the cleaned surface and the patch for a good "stick."

When the patch is smoothed out and fully dry, additional coats of dope in a color to match the original color of the ship may be added. If each coat of dope is sanded with a very fine sandpaper before another coat is added, a very fine finish is possible.

It's a good idea, when applying dope, to use a brush on the first two coats and rub it in until the fabric is well soaked. Do this as soon as possible *after* the patch has been applied. If you wait too long the patch may assume a permanent "set" and lose its tautness, producing a bad patch and finish. After the affair is well set, additional coats of dope may be added with a spray gun, allowing at least 30 minutes between coats. A first-rate patch may take as many as 10 coats of dope, so don't rush it. It will be well worth it.

An L-shaped patch should be repaired with a square patch large enough to cover the tear with the usual one inch overlap on all sides except the edge facing the air flow, where it should be at least two and a half inches. Some mechanics prefer to cover each "leg" of the "L" with a single strip of fabric, after cleaning the area and stitching with the baseball stitch, to make a neat L-shaped patch. It will do if ample overlap is left, good stitching has been done, and a thorough cleaning job has been completed. That thorough cleaning job does the trick.

If you have *never* applied a patch before, it's good insurance to dig up one of the local lads who has and have him sit by while you go to work. Pick a non-smoker if he's going to sit close for dope, at times, is about as inflammable as high-octane gas. Pick a day when the weather is warm or do it in the hangar, as temperature affects the dope, making it cloudy, thick and unsuitable. Check with some of the other pilots on this.

Now that we have dealt with fabric-covered ships, let's see what the difference is with the metal-clad planes. With the increasing popularity of the "tinbirds" many of you will undoubtedly be flying them sooner or later, and will be interested.

The worst Gremlin of the metal aircraft is corrosion. While pure aluminum is highly resistant to corrosion, the pure metal just won't take it for aircraft structures and covering so an alloy must be used. This combi tion of aluminum and other metals is stro enough for the job but, unfortunately, is p portionately less resistant to the corrosi particularly salt-water action. The most sat factory alloy is called "alclad" and has t best properties of pure aluminum and so stronger metals. It still needs attention don't think you have it ALL over the fab crowd.

Metal ships also should be washed f quently and waxed as well, so don't put aw that can of elbow grease when you buy th metal job. Almost any kind of polish a cleaner will do *provided it contains no abr sive.* Scratching the metal surface (it's or about 3/1000 to 5/1000-inch thick) will no good. The hot sun is tough on it and is too much moisture in the early morni when the sun comes up hot. Taxi slowly keep pebbles from denting the bottom of t fuselage and leading edges.

If you should have the tough luck acquire a hole in the metal covering, we su gest that you have an A & E chap handle for you. It will save amateur "butcherin of the metal and possibly a greater inju

Paint the gal's name on it, sure, for won't hurt the metal, but don't walk all ov the wing while you are doing it. The wal ways were placed where walking will pr duce the least strain on the structure; u them and not the wing in general.

While an all-metal ship requires less mai tenance than other types, neglect it and may cost you much more for repairs tha fabric-covered planes. Check it over befo each flight for dents, loose rivets, corrosio grease, and dirt films as well as signs twisting or wrinkled "skin." It will pay to catch these before they get worse.

Should your ship be grimy and the surfa oxidized (dull), try a new product that designed for this problem. It's called "KLAI and is especially designed to clean and poli aluminum aircraft metals. It removes cor sion, water marks and oxide film as well burned spots (around the engine) from a unpainted aluminum aircraft surface. I non-corrosive itself and not only removes th blemishes but leaves a high "slick" finis It's non-inflammable if you're the kind wh has to smoke while you work. It's made the R. M. Hollingshead Corp. of Camde N. J., if you want to write for more detai

Plywood-covered ships may be considere almost in the same class as metal-cover ships. The covering is glued in place rath than riveted, and this must be borne in mi when considering its maintenance. Don't wa on the plywood wings, bang the fuselage —when not flying—leave exposed to the s and weather for long hours. Small crac must be filled and waxed promptly to ke out moisture. Wash at least once every mon and give a good waxing every three mont or oftener if you like. Taxi slowly, and r up slowly to keep down those pebbles.

No matter what the covering of your a craft, keep it free from oil, grease, and gas line as much as possible. Remove any these from the fuselage and wings as quick as you can for they are not only dirt c lectors, slippery and sloppy looking but a a definite fire hazard.

Just as long as you remember the old sa ing "save the surface and you save all" you be okay. It's the surface of your aircraft th you fly with, remember. If you give *it* a bre with proper care, it *won't* give *you* one!

Silvaire

SETS THE PACE...
AND THE PRICE!

AMERICA'S LOWEST-PRICED *All-Metal* AIRPLANE

Never before has flying America had an opportunity to buy so much plane for so little money! Here's the smoothest 65-horsepower personal plane in production today... all-metal from nose to tail and from wing-tip to wing-tip! SILVAIRE, the only lightplane in production with an all-metal wing, comes complete... no extra equipment necessary for year 'round flying pleasure. For your own personal use or for training students—you can't match it!

The Silvaire Standard is economical to operate and maintain—per ground mile cost is comparable to that of a medium-priced automobile ...and maintenance costs are negligible, because the Silvaire is *hangared for life in its own all-metal skin*... and you fly in all-metal safety!

Ask your local Silvaire dealer today about a free demonstration flight.... Discover how easy it is to fly and buy America's lowest-priced all-metal personal plane. Down payment as low as **$832**

Also available is the 85-horsepower SILVAIRE DE LUXE... sleek, luxuriously appointed, meticulously finished in every detail. For complete information on the famous line of ALL-METAL Silvaires, in both 65 and 85-horsepower, write Dept. S-5.

Silvaire By Luscombe

vaire by Luscombe manufactured under U. S. Government proved Type Certiate and is Governnt certified to be npletely airworthy.

LUSCOMBE AIRPLANE CORPORATION
DALLAS, TEXAS
FIRST IN ALL-METAL PERSONAL PLANES

Magic In The Sky

(*Continued from page 25*)

operators are familiar with the Fairchild which has the tall silk hat with the rabbit coming out of it painted on the tail. That's Mardoni's insignia and whenever he lands at a field his many friends gather around and anxiously wait for the brief "free show" that he puts on for their entertainment.

An amusing incident occurred during one of these stopovers. Mardoni and Louise were pulling their mind-reading act for the benefit of hangar crews and a whole planeload of airliner passengers who had stopped off for refueling. Mardoni reached into one of the passenger's lapel pockets and took out a silver pencil. "What am I holding?" he asked Louise who was blindfolded. She described the pencil in such detail, even down to the initials, that another one of the passengers recognized it as his pencil which he had lost several years before. The two men got together and the rightful owner thanked Mardoni for finding his lost article.

Another time Mardoni was taking off from the Municipal airport in Chicago when a voice from the tower stopped him at the end of the runway. "What did you say your name was?" the man in the tower said. "Hines," the pilot repeated, remembering the name on his license. "Oh," said the voice in the tower, "A CAA inspector's here and thought he recognized your plane, but he says the guy he knows is Mardoni."

It's tough enough having two names, but Mardoni has a triple problem—three loves, magic, flying and Louise (that's his wife's priority listing), and it keeps him plenty busy trying to be tops with all three. Happily, all three mix well. They both love their theatrical profession and they are listed among the top three acts of their kind in the country today. And Louise likes to fly about as well as Mardoni. He's teaching her to fly her own plane, a small Piper *Cub*, which she recently acquired. And when she gets real good he's thinking of getting another larger plane so they can carry more equipment around the country with them and put on a bigger and better show for the audiences.

To date the Fairchild "24" carries an odd assortment of cargo when Mardoni and Louise take off for some new performance place. It's nothing unusual to see them unload the plane and watch rabbits, doves, white mice and virtually a whole menagerie come into view. Once a flock of trained pigeons got loose and Mardoni had to chase them all over the airport. And on another occasion they flew 500 miles to meet a party date and in the back of the cabin where the seats usually are there was a portable guillotine which Mardoni uses to chop off the heads of the curious. They also brought along a crate of large cabbages to make sure they didn't overdo the trick and make the unlucky stooge's real head drop into the basket.

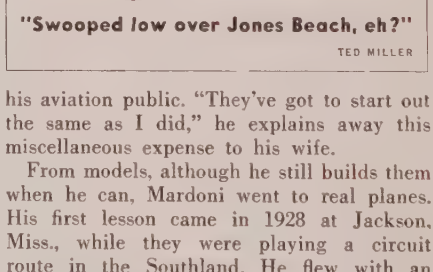
But when he's not doing some trick like cutting off his best friend's head, Mardoni is engrossed in aeronautical books to keep up his 14 different aviation ratings (they range from commercial pilot to ground mechanic's license), or he's out at the airport and up in the sky doing some throttle jockeying.

"Flying is sport, pleasure and business to me," he says with typical Mardoni enthusiasm.

You'd think it more than that to hear him champion the cause. "The airplane will never replace the automobile, but it outclasses any other mode of transportation," he told a new acquaintance one night. He had just met the gentleman after one of his acts in the Brown Hotel in Louisville (Ky.) and according to Louise he talked the newcomer's leg off trying to convince him of the utility of the airplane. "Take my own case," he told his new friend, "Louise and I have a country home and it's near an airport. If we didn't have a plane we'd never get a chance to be at home. But as it is we can run down there weekends or on our off days even though we're doing a show hundreds of miles away. And the upkeep of the plane pays for itself when we use the ship for our business purposes. Why, I wouldn't trade that Fairchild for the best yacht in the world."

"I see you wouldn't," soberly replied the friend, who Mardoni later learned was General Donald Connolly, Administrator for the CAA in Washington, D. C.

Born in Elburn, Illinois, 42 years ago, Mardoni got into the flying game via the model plane route. (And that's not just for color, either.) He's a bug for the gas jobs and has been for years. In fact, whenever Louise goes to pack there are aircraft frames and unfinished wings that have to go along or hubby would raise the fuselage. Because of this interest Mardoni opened up a small hobby shop in Elburn which he now has someone else running for him. A close examination of the books shows a lot of I.O.U. slips (Mardoni usually pays them) from the local youngsters who can't quite keep up all their payments for their models but whom Mardoni thinks someday will be part of his aviation public. "They've got to start out the same as I did," he explains away this miscellaneous expense to his wife.



"Swooped low over Jones Beach, eh?"

TED MILLER

From models, although he still builds them when he can, Mardoni went to real planes. His first lesson came in 1928 at Jackson, Miss., while they were playing a circuit route in the Southland. He flew with an instructor for several hours, catching on fast in the old Waco. But the next day he was sick to his stomach and worried. It turned out to be ptomaine poisoning and not flight sickness, however.

The following year there wasn't much show business because of the general business slump and Mardoni had plenty of time to run up a big bill for flying instruction at a local airport during the summer.

He paid off the debt with the money he got for performing a daring stunt from an airplane. The trick combined both his magic and flying except it introduced an exceptional bit of acrobatic flying. The crowd that gathered around the Chicago port for thrills and spills remembers it

A Chicago police car sirened out waiting plane and policemen took o man in a straight jacket. It was Mar grinning and impish as he posed for reel cameramen and reporters.

The whole stunt to follow was summed up by a spectator who turne Louise—not knowing she was Mardoni's —and said, "If that guy thinks he's g to get loose from that thing while dangling from the end of a rope up i airplane, then he's wearing the right of a suit and they better take him ba the white house on the hill."

It was crazy, but Mardoni who was billed as one of the nation's top escape tists had decided to prove his mettle there was no stopping him. The plane off. The crowd screamed when they saw figure dangling in mid-air. And they y approval when they saw Mardoni, who hanging headfirst and fast, untangle hi and climb back up the rope into the p

Years later, Mardoni used the air again as part of an exhibition act. time he was in San Diego. A sheriff his handcuffs on the magician and t away the key. Then a pilot friend took doni up in his plane to 3,200 feet and doni jumped out with a parachute. D down, down his body twisted and turi nearer and nearer to the earth and the slipped out of the handcuffs and pulled rip cord, the 'chute opening with only onds to spare.

After that, however, Mardoni's flying been confined to saner tactics and no parachute jumps. He bought the Fairc and put it to utility hauling the Mar show around the country.

Sometimes, however, part of the went by automobile. That is, Louise some of the costumes and other stuff in car while Mardoni flew overhead and on ahead to make final arrangements in next city. When they traveled this way doni would sometimes find a level field motion to Louise in the car by signal with the wings that he was going to She, in turn, would stop at a roadside and get hot food and they both would joy lunch together under some tree g They call it "plane picnicking." To mak easy to spot his car on the highway an the cities Mardoni painted a big y circle atop it. And later he had a radi ceiver installed and fixed it so he could to Louise from the airplane while she driving along in the automobile. couldn't talk back, either.

Mardoni wasn't just satisfied with his plane for personal gains, however, when war broke out he made the available for liaison work and Red C duties, often times taking time out from shows to fly special missions. And, this being enough, he quit his act for a co of seasons and went to Kansas where served as a flying instructor at a Navy ing base teaching young flat-top hop the art of joysticking.

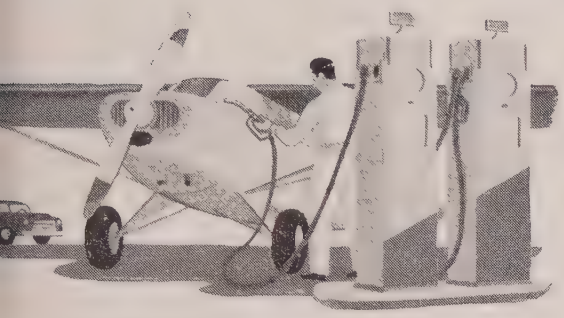
And now after the conflict is over often stops at an airport owned by a f of his and helps "break in" young by serving as a dual instructor. His f calls him "the man who makes magi the sky."

STANDARD OF CALIFORNIA'S

PLANE FAX

A page of service tips for private flyers and fixed-base operators

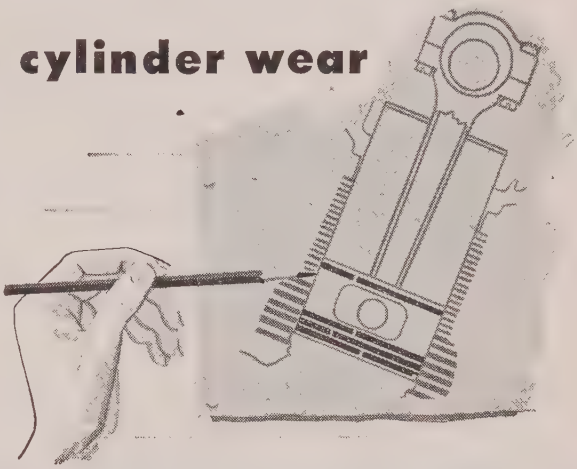
Use of automotive fuels in aircraft hazardous



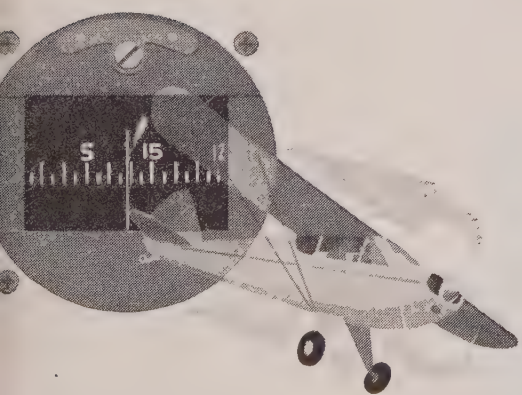
Gasolines engineered for automotive engines are not suitable for aircraft because of their high lead content which sometimes results in lead fouling on aircraft-type spark plugs... also because of the hazard of vapor lock, which may result in engine failure in the air. Aircraft engines require a perfectly balanced fuel such as Chevron Aviation Gasoline to give easy starting, smooth idling and dependable performance at high altitudes.

low "RPM" reduces ring and cylinder wear

e most difficult place to lubricate in aircraft engines is the upper ng travel. This is where temperatures are highest and, since ordiry oils move from hot to cooler areas, upper cylinder walls are ten left bare of lubricant. RPM Aviation Oil is compounded to ck to hottest areas and save ring and cylinder wear. "RPM" also ntains a "detergent" which keeps pistons and cylinder walls ean, rings free and prevents ring-groove deposits.



Pamper your compass to stay in the groove



During cross-country flights your compass is the boss. That's why it deserves a little pampering and extra care. Experienced pilots depend on RPM Compass Liquid to do the job. It meets exacting fluorescent tests and will not affect the luminous paint on instruments. Its controlled viscosity provides correct damping of compass dials at all temperatures.

HEVRON NATIONAL CREDIT CARDS are od at airports throughout the United States d Canada. Ask your Standard Airport Dealer the West... or write to Standard of California, 5 Bush St., Room 1618, San Francisco 20, Cal.

Wings North

(*Continued from page 28*)

the dock in front of a cabin on Oriskany Lake.

It was still the same afternoon when we broke out fly rods and went after red and grey trout. It was still long before dark when one of the gang appeared with an eight and a half pounder and promptly swept up the opening day's trout pool.

This isn't a story of just the fishing in the area or I would tell you of landing two- to three-pound trout the following day; trout from Lac Silver that were seemingly bent on devouring every fly you could toss at them; larger trout from Spring Lake and from Yate, Sundanse, Blackburn, and other waters. If it were a fishing story you would learn of the three- and four-pound trout that came from the diamond blue waters of Lac Blue, that six and a half-pounder picked up in Long Lac, or the flame-colored beauties from Mountain Lake. We could even digress and tell you how three canoes tried to catch up with a cow moose in the water after a young bull had been seen trotting off through the brush. You could be told how one canoe was near enough for the front man to touch the animal with a paddle.

It would be in keeping to whet your appetite with stories of the big meals of trout, restful sleep in a land beyond the sound of auto horns, and tales around the campfire. But we just couldn't do that since this is merely an account of an air journey.

Normally a fishing week in that area consists of two days going, two days fishing, one day of packing up, and two more to get home. This was a different kind of a week. It was our seventh day at Oriskany and we were out fishing after lunch when we heard the drone of approaching planes. Down they flashed and pontoons kissed the surface with a tiny surge. In they taxied to the dock.

Guides brought paper cartons of delicately smoked trout prepared over Indian fires. Those cartons along with rods, duffel and fisherman soon found their appointed place in the two ships. Yells of farewell sounded as engines were gunned for the take-off down the lake.

In contrast to our trip north, the sun shone brightly for the journey south. We climbed to 7,000 feet and below, as far as the eye could strain, lakes could be seen—tiny lakes, medium-sized lakes and great bodies of northern water, all of them teeming with fish and some of them probably waiting for the first angler to come along to try for their finned bounty.

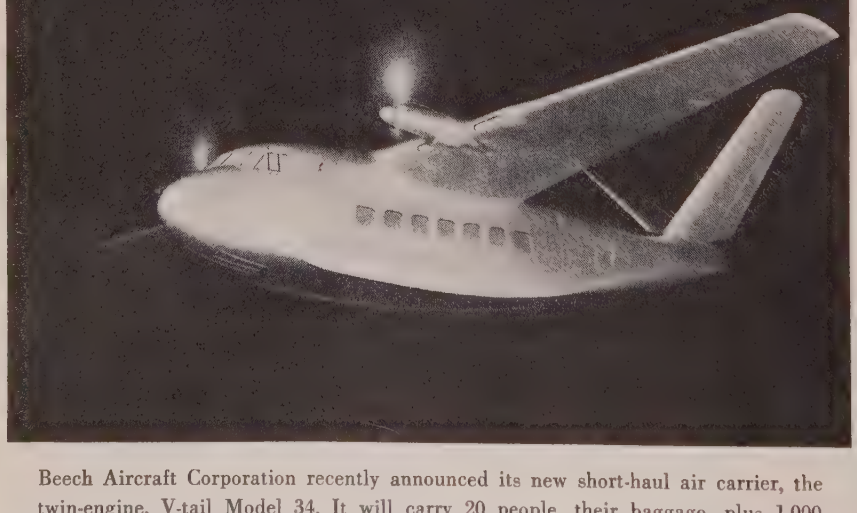
Now we caught sight of a lumber cabin below. Then the beginning of a tiny road pointing south. The cabins increased in number. The roads grew more pronounced. Finally there was the movement of an automobile on a highway. We were out of the bush. Mountains were left behind and the St. Lawrence loomed ahead. Down we slid to a placid bay.

Swiftly ships were unloaded and cars arrived to whisk us to our Montreal airport. Once more the transport. A stop for customs as we landed south of the border—and soon we were home.

At one o'clock in the afternoon we had been fishing far north in the bush country. At 10:30 o'clock at night we pulled out the light and settled to sleep in our home bedroom.

Believe me, Mister, if you get any telegrams that say something about "fly in" and you have no desire to take the skyway to Utopia—then, gentle reader, you just are not a fisherman. You can have the highway —let me have the flyway when the goal is trout of the northland.

BEECH AIRCRAFT INTRODUCES NEW AIR CARRIER



Beech Aircraft Corporation recently announced its new short-haul air carrier, the twin-engine, V-tail Model 34. It will carry 20 people, their baggage, plus 1,000 pounds of express, have maximum range of 1,400 miles. Scale model is shown here.

Forestry Air Force

(*Continued from page 46*)

now as the standard means for such a cen They will also be used to detect poach who are attempting to catch salmon in ri designated as closed.

Even more recently a helicopter was u in Alaska for taking census of caribou,

Coyote den spotting will be another the many missions assigned the pilots of department's new air fleet. An historic m ace in the West to almost all livesto coyotes and their lairs can be seen from air much easier than from the ground.

The government pilots will not be allo to carry armament of any kind, but t will flash the word to parties on the gro when they do mark a coyote den. Sc private pilots, however, have become rat adept at shooting coyotes by rifle from pla

Until last year the department had to exploratory work in wildlife protection census with only two planes of its own whatever help from the Army, Navy, St and charter services, it could borrow.

Then, employing the system of interchan constantly going on among departments the Federal Government, it obtained its m fleet from War Assets Administration.

Included in the group are surplus *Flying Jeeps*, used by the Army Air For for reconnaissance work under the gene name of "grasshoppers," Cessnas, Vulte Piper *Cubs*, two Grumman *Widgeons*, a one Republic *Seabee*.

Eventually, the department plans to planes for guarding as well as for every ty of fish and wildlife census. But the Sta county, and Federal game wardens need ha no fear that the airplane is going to them out of a job. The man on foot just as important here as in the Army. A craft simply will make their job easier a more accurate. In this respect, Frederick Lincoln, biologist with the Fish and Wildl Service, pointed out in a recent report:

"One sportsman optimistically report 250,000 ducks wintering on his property a Southern State. Yet a flyway biolog with many years' experience in estimati waterfowl concentrations had flown over t property at low altitudes on several occasio and never reported more than 18,000. It's in the perspective."

On methods of tabulation, he added:

"All reports are carefully studied for pr able error by the game management age Then he makes his report and forwards it the regional office where a team, compos of the regional director and his assista the supervisor of law enforcement, t regional biologist, and frequently one of t flyway biologists, reviews the information.

"When the regional reports are received Washington, they are compared along w data from Canada and, when obtainab from Mexico and other countries to t south, and thus form the basis for the es mate of Continental waterfowl populati available to restock the breeding grounds

A further use of planes is in stocking mote streams and lakes with young fish. T department does not now plan to use own planes for this purpose but will ass the States in doing it.

Such is the work of the Government's n air force—a peacetime job involving secur of another type.

00 in Ercoupes

If you would like a trial flight in one of these certified spin-proof planes, you may have one without obligation at the dealer airport nearest your home. The ERCOUPE distributors listed alongside will direct you to the dealer in your territory.

ERCOUPE is a two-control, spin-proof plane that makes flying safe and easy—its two controls are a steering wheel and a throttle; no footwork in flight. It carries two people and luggage over 100 miles in one hour on five gallons of gas. The ERCOUPE is highly maneuverable; has tricycle landing gear which is ideal for rough terrain and its all-metal construction means low maintenance cost. These fine planes are selling for $3450.00 f.a.f. as of April 10, 1947.

All entries must be addressed to SKYWAYS-ERCOUPE Contest Editor, Henry Publishing Co., Room 3708, 70 E. 45th Street, New York 17, N.Y.

CONTEST RULES

1. In case of tie, a duplicate Grand Prize will be given to each winner.

2. All entries will be carefully judged as to originality, uniqueness of idea, sincerity of expression, logic of argument and neatness.

3. The prizes consist of three new ERCOUPES. One will be given for the best letter on each theme: "Why I Want To Own An ERCOUPE;" "What I Consider Ideal Features in a Personal Plane;" and "What I Consider Requisites of a Private Pilot."

4. The judges are Fred E. Weick, V.P., Engineering and Research Corp.; J. Fred Henry, publisher, SKYWAYS; and Charles B. Strauss, V.P., Dorland Internat'l, Pettingell & Fenton, Inc. Decision of the judges will be final.

5. There is no limit as to number of entries for each contestant and each may try for all three Grand Prizes.

6. Letters must be accompanied by an entry coupon as shown on this page or a reasonably exact facsimile thereof.

7. Winning contestants must accept f.a.f. (fly-away factory) delivery at Engineering and Research Corp., Riverdale, Md., within thirty days after notification that they have won.

8. Contest open to everyone except employees of Henry Publishing Co., Engineering and Research Corp., and their advertising agencies.

9. All letters and their contents become the property of the sponsors.

10. Winners will be notified individually and full announcement will appear in the first available issue of SKYWAYS.

11. There is no limit on number of words used in letters.

12. Both entry coupon and letter are to be mailed to SKYWAYS-ERCOUPE Contest Editor, Henry Publishing Co., Room 3708, 70 E. 45th St., New York 17, N.Y. All entries must be postmarked no later than midnight, August 15, 1947, closing date of contest.

ENTRY BLANK

SKYWAYS-ERCOUPE Contest Editor
Henry Publishing Co.
Room 3708, 70 East 45th St.
New York 17, N. Y.

Enclosed is my entry to the SKYWAYS-ERCOUPE Contest. My letter is for the Grand Prize No. One ☐ Two ☐ Three ☐ (Please check).

Name_____

Address_____

City_____ Zone____ State_____

Send Your Entry Today

Pilot's Report

(*Continued from page 35*)

The Vultee uses an inertia-type starter and if the battery fails there is always the old hand crank—that mankiller!

With four pounds on the fuel gauges, the energizing switch is flicked left until the inertia reaches top speed. To the right engages the flywheel and turns the engine through. Keep the wobble pump going until pressure shows on the fuel gauge.

Check the instruments, making especially sure that the oil is up to 50 pounds. When it reaches a constant pressure the propeller can be pulled back into low-pitch, high-rpm setting.

Taxi procedure and radio conversations with the tower will be taken for granted. Don't taxi with the flaps down.

Temperature of 30 degrees centigrade is required before running the engine up. The magneto check is made at 1500 rpm. A maximum drop of 75 revs is allowable. Doc's ship has a good engine and drops less than 25 on either side.

The prop is checked at 1500 and should pull the rpm down to 900 in high pitch. Back in low pitch the ship should turn about 2000 wide open.

Check of controls includes a very careful inspection of the trim tabs. Some unthinking friend, or an extremely thoughtful enemy, might have racked them all the way up or down. If you miss it, you're apt to be missed yourself.

Flaps are set at 20 degrees. Elevator trim tab is neutral for take-off and the rudder trim tab should be set from three to five degrees to the right. This to help counteract torque which you begin to get in considerable degree at this horsepower.

In take-off position, line up the runway first. The nose should be just a shade to the right because torque will bend it some in spite of all hell. Then about the time the tail lifts and you can see the runway you'll be straight, or at least close.

The throttle should be applied steadily and surely without change of pace. As power increases, the pressure the pilot will have to hold on the right rudder will grow stronger to compensate for torque. Remember, on a ship like this you fly by control-pressure, not control-movement, but on some needful occasions those pressures can be terrific.

With 20 degrees flaps the tail will come up automatically and the ship will fly itself off at about 80 mph. Doc likes to level off at 25 feet and let speed climb to 90 or 100 Indicated, meanwhile throttle back to 2150 before starting to climb out at 500 fpm. It will turn up to 2500 before take-off and that is too much horsepower to keep pulling except in emergency.

At 400 feet you can start pulling the prop back into higher pitch. As the pitch bites deeper the engine slows and more throttle will be needed promptly. Increase it to hold 1800 to 1900 rpm, and the mixture control is then leaned out so the exhaust is a blue flame instead of yellow fire. With 1900 rpm at indicated air speed of 110 mph the ship should go upstairs at 500 fpm, drawing about 75 per cent of the engine's power.

At altitude the flaps are picked up slowly and the ship lined out with about five degrees of nose-high trim. Then cut back to 1750 revs. and lean it out until 100 revs are lost from starvation. Then richen the mixture until it runs a smooth 1750 once more and add one notch richer for luck. This gives a gas consumption between 17 and 19 gph on Doc's ship. Others may vary a little one way or the other.

The ship will trim up now and fly hands and feet off—being very stable and easy to fly, carefully.

Doc admits there is a lot to think about and it does keep him busy. But he doesn't think the airplane is beyond the average well-trained pilot's ability.

Making a standard 800 foot traffic pattern to land, Dr. Kerr stays about ½ mile outside the *Cub* ring. On downwind leg he drops 20-degree flaps, throttles back to change to low-pitch, high-rpm, and then guns it to 1900 to restore oil pressures and advances the mixture to full-rich position. He makes his turns at the standard rate, one-degree, using his ball-and-bank indicator for guide.

He turns at 110 Indicated until on final, about three miles out, at which time he begins slowing down to hit a steady 90 Indicated for the final approach all the way down. After the final turn 10 more degrees of flaps are added and Doc uses whatever power is necessary to pull the ship onto the runway. If undershooting, add power; if overshooting, add flaps. He seldom throttles back under 1000 rpm on the long approach. This he feels is necessary to give him the time he needs to correct drift, roll tabs forward or back and make the myriad other maneuvers pertinent to a good landing. He says, "The glide is your landing in the BT. If it's good, you're on smooth."

He levels out and throttles clear back about 25 feet high and then holds it off, letting the plane float, as it tends to do at this speed (with flaps down) for a few seconds, then the sink is rounded out for a three-point touch-down at about 70 Indicated. If he is going around again he trims his elevator tab at once, pulls up 10 degrees of flaps and gets the power back on. If not, he ups the flaps and lets it wend its way along the mile stretch of smooth pavement. After it slows to 35, he uses brakes if it will help him make a shorter turn off. But not too much. They wear fast.

He generally likes the canopy open for better perspective.

There really isn't much else to say about the ship.

It seems perfect as a low-initial-cost transitional trainer for the flying Ogden Chiropractor who plans on owning a modern 450-hp five- or six-passenger plane that will cost a lot of money.

The Vultee holds 120 gallons of gas, 60 in the left tank and 17 and 43 in the right with a stand-pipe furnishing the one hour maximum reserve. It holds 10.9 gallons of oil and burns normally one quart an hour.

Dependent on the flying being done, gas runs between 17 and 25 gph. As a test though, one 50-minute hop used only 14 gallons.

He hangars the ship wintertimes as a convenience. Standing out wouldn't damage it, but would complicate the frigid starting procedure which hangaring eliminates. For the rest of the year it will stand out, keeping hangar costs to about $100 per year.

After each flight Doc carefully wipes the ship clean as he wants to fly it in his business suit quite often and doesn't want a cleaning bill added to the cost of each hop. At regular intervals the ship is washed and waxed.

It is licensed for two persons and 175 pounds of baggage.

Maximum climb from Ogden's 4,450-feet field elevation is about 800 fpm and the ship has a service ceiling near 18,000 feet. Its full throttle top speed is about 165.

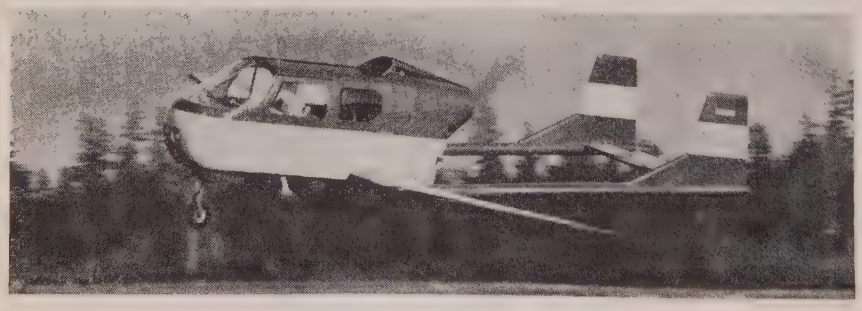
It will take off in 1,500 feet in calm air at Ogden and can be stalled off in a lot less by experienced Army instructors, a practice which Dr. Kerr eschews as unnecessary to the kind of private flying he contemplates.

The smooth balance and pressure-shading of the controls provides his touch with a delicate range of control movement that he expects to find duplicated in the newer five-place ships.

He has learned to hold in awe the ship's wicked high-speed stall and its quick over-the-top spin, but he has also learned that it can be put into slow flight and will work down to 75 mph Indicated without getting cantankerous.

Considering it as a low-cost transitional trainer to fit him for a new and expensive plane, Kerr feels that the Vultee is a good investment even if he only keeps it another year or so and flies it only a couple of hundred hours. But he doesn't want too much time to elapse before he can buy a bigger ship, a newer ship, with more speed and bigger pay load.

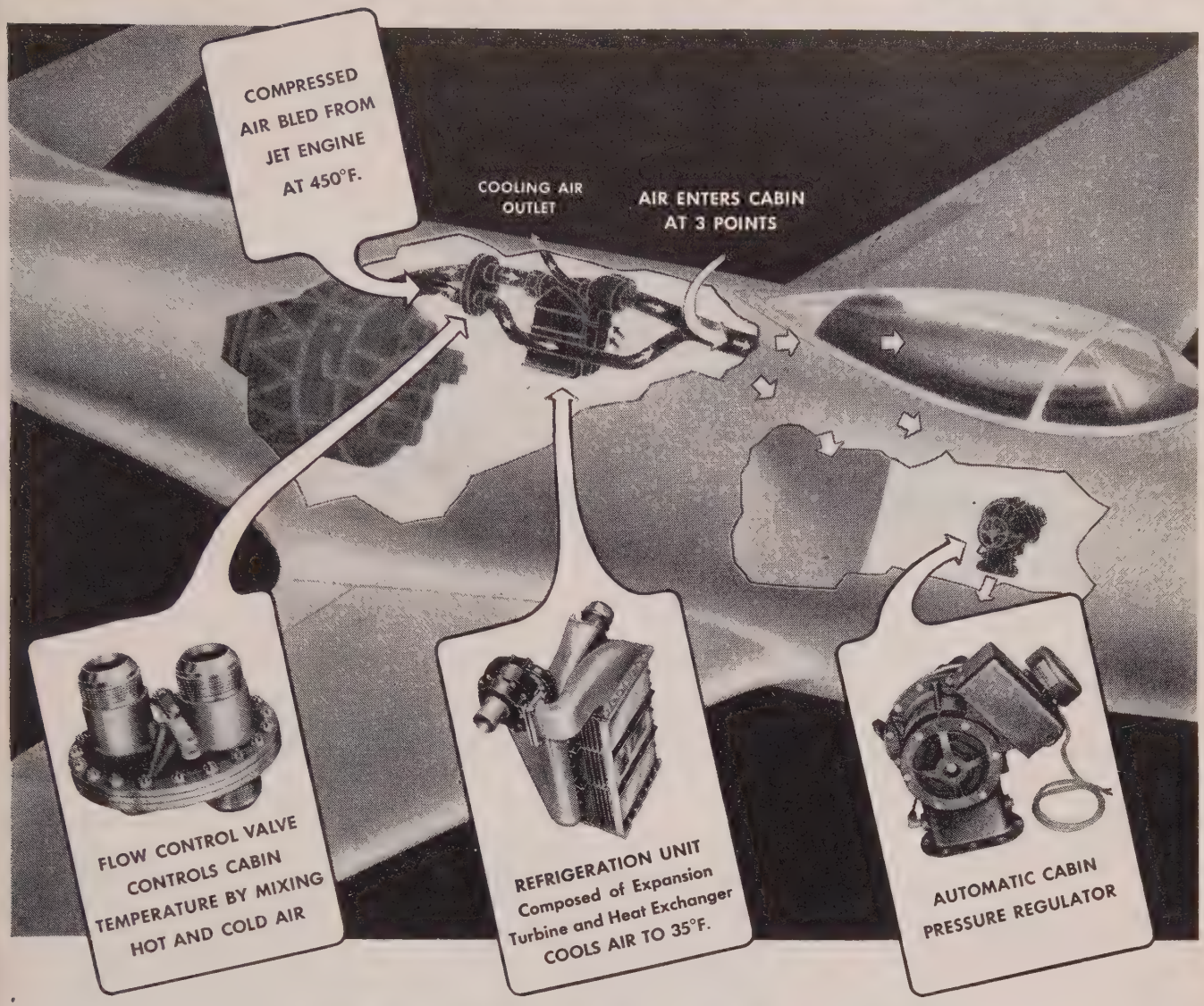
"You get tired of talking to yourself," he says doggedly.



WHEELAIR 111A

First four-place two-control spin-proof plane to be offered personal plane owners is new all-metal *Wheelair*, manufactured by Puget Pacific Planes, Inc. Design affords 160-pound baggage capacity, spacious interior, good visibility.

"Cabin Comfort" for Jet Fighters


COMPRESSED AIR BLED FROM JET ENGINE AT 450°F.
COOLING AIR OUTLET
AIR ENTERS CABIN AT 3 POINTS
FLOW CONTROL VALVE CONTROLS CABIN TEMPERATURE BY MIXING HOT AND COLD AIR
REFRIGERATION UNIT Composed of Expansion Turbine and Heat Exchanger COOLS AIR TO 35°F.
AUTOMATIC CABIN PRESSURE REGULATOR

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A difficult problem in air conditioning is inherent in jet airplanes . . . it is that of controlling the heat caused by compression and high speed. Operating at high altitudes, the planes must be pressurized, but the only compressed air available comes directly from the jet engines — at temperatures above 400°F. Added to this is the great heat generated in the fuselage by air friction due to high speed. Before this hot, compressed air reaches the cockpit, it must be cooled to as low as 35°F.

With "Cabin Comfort" systems, including pressurization and cooling, AiResearch solves this and other problems of air conditioning for designers of all types of new airplanes. All parts, controls and accessories are provided for complete installations.

AiResearch leadership in aircraft *air control* is backed by seven years of pioneering research and production. Call upon this unique background to solve your AIRCRAFT air conditioning problems. AiResearch Manufacturing Company, Los Angeles 45, California.

• *AiResearch "Cabin Comfort" equipment conditions the newest Lockheed Constellation and new planes of Consolidated Vultee, Douglas, Martin, Republic and Northrop.*

MIDGET TURBINE ALONE COOLS AIR 140°F

Revolutionary development in the jet fighter "Cabin Comfort" system is the 3-lb. AiResearch expansion turbine. Operating at speeds up to 100,000 RPM, it cools air 140°F. at 7 lbs. airflow per minute. Another AiResearch *first!*

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Week-End Sportsmen

(*Continued from page 37*)

make the 300-mile trip in two-hour jumps and three stops. Mrs. Harrington is navigator. On their air map which shows all railroads, rivers, towns, power lines, radio station towers and roads, she draws a straight line for their first leg. They don't cross the lake, but fly along the shore. Their first refueling stop is Grand Rapids, Mich. The second line on their map leads to Cadillac, Mich., another two hours away. Last stop, and all out, is the airport at Pellston, Mich., just beyond Petoskey. It was formerly developed as a base for Army bombers to guard the Michigan locks at Sault Ste. Marie.

Their guide, Lou Hankey, is actually a personal friend who owns a lumber yard up there, and has lived in the territory all of his 32 years. He meets them at the airport with a small truck. They load on their gear, drop the bag at the Perry hotel in Petoskey where they generally stay, and then Hankey takes over.

"He drives to a spot he has previously picked out," Harrington said, "and we go the rest of the way on foot. Sometimes we've been out as long as seven and eight hours. The area is pretty well populated, though, and it is possible for us to arrange for lunch or dinner at a nearby farm house. Actually, we're very careful people—flying and hunting," he pointed out. "Before we leave home, we arrange for shells and any licenses at a Chicago sporting goods store, Von Lengerke and Antoine. My non-resident license for deer in Michigan last year was $25. We took 25 to 50 rounds of single shells with us. And I'll admit we had more misses than hits."

When they get a buck, the animal has to be sent home by car. "If I were flying alone," he said, "I might be able to fly it back with me."

The couple always flies so they can see landmarks. "One time," he recalled, "we were going to the Muskegon airport. We took off for our general direction, and while watching some fast planes on the field land and take off, we didn't watch where we were going. All of a sudden I couldn't recognize the surrounding terrain. It was a town encircled by a river. In the hope the town might be marked I went down to 2,000 feet to look around. Sure enough, I saw a sign on a garage roof that said 'White Cloud' with an arrow pointing north. Nice and convenient. So we climbed back up and headed for White Cloud. It was on our route anyway."

Carolyn Gilbert favors the same type of plane, (Aeronca) for golfing weekends. The low door permits her to wear street clothes to fly in. She can wear sports outfits to the studio and, as soon as she is free, head for the wide open spaces in Land O' Lakes, Wisconsin.

She and her husband, Ed, an NBC musician, usually stay at the King's Gateway, a year 'round resort with a 36-hole golf course.

Approximately 350 air miles from Chicago, they make the trip in four hours. It is nonstop, using 18 to 20 gallons of gas each way. They carry about 50 pounds of luggage—meaning golf clubs and overnight bag.

The Land O' Lakes airport can be seen from the resort which is only walking distance anyway, but the station wagons come down to the field to pick up luggage and passengers. Week-enders may land and tie down their planes free of charge at the airport. In inclement weather, they pay $1.50 a night for hangar space.

Golf is the main attraction on the Gilbert agenda. Saturday night, they enjoy the resort facilities and just lounge around, or, if the quiet of the country pales on them, they walk two blocks to find a night club, bowling alleys, or a movie.

Sunday night, they are back at Sky Harbor airport in Chicago. Rental fee for the plane is $10 an hour—while in flight. "All told, the weekend costs us about $125," Mrs. Gilbert added up. "Knock off $80 at least if you own your own plane. Which we hope to do—soon."

Russ Brown learned to fly when he was a soloist with Jan Garber's orchestra in 1937. His busy schedule as a free-lance singer around Chicago doesn't give him a week at any time for fishing, but the thought of muskie and wall-eyed pike tempted him into a solution. He finagles to get someone to pinch hit on his Friday show, so he can get three days off. Then with a buddy, usually Don Herbert, an actor-writer and former *Liberator* pilot, the pair heads for Leech Lake, near Walker, Minn., 600 air miles from Chicago.

Out at Sky Harbor airport, they work out there flight plan. Brown favors the 175-hp *Fairchild* with the open cockpit, not only for the acrobatics he occasionally likes to perform but because the plane is good for short take-offs and landings where there are no regular airports. "The ground is cleared sufficiently up there in Minnesota for us to make a decent landing," he said, "but the plane has to be lashed down firmly. There are additional little hazards, such as no landing lights at night and occasional soup that makes flying tough, but we still like it."

When they first began flying up there, "we used to take enough stuff to last us six months," Brown recalled. "Now we go fairly light. We take a couple of rods, a favorite reel, our favorite flies, two suits of long underwear, three or four pairs of wool socks, a nylon rainsuit and a poncho. A side of bacon, too. Before we go, we arrange for non-resident fishing license, $3; a guide who costs us $10 a day, but he supplies a truck and boat; and $4-a-day cabins where we stay."

Anything they forget, they can pick up at a general store in Walker, they said. The forest rangers are helpful too, pointing out places where they should and shouldn't go.

"Many's the time," Brown said, "that we've fished all day, with nothing to show for our effort but an appetite. By the time we have to go home, however, we take enough fish to a nearby storehouse to be packed in ice and sawdust, to make honest men of us when we return."

Easy, isn't it? How soon can you start?

FLYING FARMER IN ENGLAND

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FLIGHT ENGINEERS COURSE
announcement

Our Aeronautical Training Division announces its Flight Engineer Course. Enrollments are accepted at any time. The purpose of this course is two-fold; first to prepare qualified applicants for the new Civil Aeronautics Board Flight Engineer License Test. Second, to give the theoretical training needed to carry on practical work of the Flight Engineer, such as will be expected by the Agencies seeking his services. This class will have the advantage of the experienced personnel and teaching staff of the Pan-American Navigation Service.

Chief Instructor in charge of the Flight Engineers Division is E. J. Demas, B.Sc. and A.E.; flight engineer in foreign and U. S. service, and three Byrd Polar Expeditions; Asst. Chief Flight Engineer, Lockheed Aircraft Corporation.

Applicants desiring to enroll should make an early decision as the number to be accepted is limited. Address, Registrar, Flight Engineer Division.

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WASHINGTON NEWS

BY ALICE ROGERS HAGER

IN THE midst of much moaning about the present unhappy state of the aviation industry, a recent speech by William A. M. Burden, Assistant Secretary of Commerce for Air, offered a wholesome note of common sense. Mr. Burden said, in part, "The difficulties through which American aviation is passing, while substantial, are not insuperable and solutions to the most important of them are well under way. Our aeronautical activity, both civil and military, is two to five times greater than it was before the war. There is every probability that, given sound government policy, adequate support in the form of appropriations, and continued intelligent and aggressive work on the part of industry, the further growth which has been forecast for the next 10 years can be attained. If it is, aviation will be a billion dollar industry in 1955. I have sufficient faith in the common sense of the American people and their particular genius in the science of aeronautics to feel sure that the basic requirements will be met."

Then Mr. Burden discussed the outlook for personal flying. "This . . . is more uncertain. The achievements to date are substantial and the possibilities enormous, but those possibilities cannot be realized without far more work than is going on at present. Superficially, recent progress has been remarkable. There are 92,200 civil aircraft registered in the United States today, or four times as many as in 1941. Civil aircraft production in 1946 amounted to 34,900 airplanes, which exceeds the previous all-time peak year of 1941 by 410 per cent. However, personal aircraft sales are currently falling off sharply and it is clear that the utility of the personal airplane and the helicopter must be greatly increased if we are to reach the goal of 400,000 aircraft by 1955 which was promised by forecasters a year or two ago. Increased utility means above all more airports and more rapid progress in airplane and helicopter design. A national airport program has been approved by the Congress and its implementation awaits the necessary appropriations—no certainty, I can assure you, in these economy-minded days. An aggressive program is necessary in the design field and if budgetary limitations permit, we hope for greater governmental financial support for personal aircraft and helicopter development over the next few years."

As we have said so many times before, the work you hometown folks do in making your own Congressmen realize the urgency of supporting an intelligent, coordinated air policy is the quickest and surest way to get your own problems solved. There is also plenty of local support needed for your own better flying conditions. For you Flying Sportsmen who are turning your eyes northward this vacation season, CAA is offering detailed advice and instructions for winging your way to Alaska via the inside route. Virgil E. Stone, CAA Personal Flying Development Expert for the Territory, suggests following the Alcan Highway from Great Falls, Mont., to Fairbanks, with pilots urged to keep a course within walking distance of the highway, in the event of a forced landing. Clear your flight with U.S. Customs at Great Falls and file first flight plan to Lethridge, Can. (Clear Canadian Customs there.) Dist. 165 mi. Second flight plan to Edmonton, (285 mi.). At Edmonton, again check customs and clear with RCAF as to rations and equipment needed: sleeping bag, flash lights, pocket compass, axe, matches in waterproof container, insect lotion, rifle with ammunition and fishing tackle. Get weather clearances at all stops. Remaining stops and distances are: Grande Prairie, 240 mi.; Ft. St. John, 100 mi.; Ft. Nelson, 190 mi.; Watson Lake, 235 mi.; Whitehorse, 215 mi.; Northway (Alaska), 270 mi.; Fairbanks, 225 mi. Get Flight charts 13, 14 and 15.

Distances may be slightly longer if you are told to follow the highway exactly, but don't plan any hop over 325 mi. Each stop will tell you where to land next. Final Canadian customs clearance at Whitehorse and U.S. at Fairbanks. Fuel, food and beds are available at all Canadian stops but fuel arrangements must be made at Northway in advance. Avoid calling customs officers before 8 A.M. or after 5 P.M., or on Saturdays and Sundays—extra charge made then.

Magnificent scenery, great hunting and fishing and lots of picturesque experiences await you.

* * *

The National Airport Plan calls for building of 153 new seaplane bases, distributed as follows: Ala., 7; Ark., 3; Fla., 16; Ga., 4; Idaho, 3; Ill., 3; Ind., 3; La., 5; Mich., 21; Miss., 8; Mont., 13; N. Mex., 4; N. Car., 4; Okla., 4; Ore., 4; Pa., 1; S Car., 8; Tenn., 4; Tex., 17; Wash., 8; Wis., 7; Alaska, 6.

* * *

Airlines flying to Europe are enjoying a summer boom, with tourist travel at last under way. PAA, AOA and TWA are averaging about 1,500 passengers a week to Europe, with four European lines offering 650 seats a week and a fifth line starting. Air freight exports and imports are soaring.

* * *

G.I. flight training has approximately 65,000 students enrolled in 2,100 approved schools. Fixed-base operators, however, are warned by N.A.T.A. that all contracts with VA expire June 30th and must be renegotiated. Under the law, eligible G.I.'s who select such training must enroll in a state-approved school within four years after the President has declared an end to the War Emergency and the course must be completed within nine years after such proclamation.

* * *

AAF is using a Fairchild C-82 *Packet* (modified) and a specially trained crew to demonstrate latest developments and techniques for airborne operations to troop carriers and airborne units in Japan and other Far East installations. The plane has two bail-out doors for doubly-fast exit by paratroopers; carries 32 men fully equipped and a five-man crew. Range is 2,700 miles with top load of 54,000 pounds.

THERE'S BEEN A BIG DROP IN HOWITZERS

No telling what the Army Air Forces will do next with the Packet.

They've transported Airborne Troops and Air Transportable Infantry. They've towed gliders, carried weapons and cargo on maneuvers that are setting the pattern for the swift mobility of our peacetime army.

The Packet has carried jeeps, trucks, even helicopters.

Now, through the ingenious application of ribbon parachutes, a Packet can deliver a 75 mm. howitzer — by air — ready for action to forces deployed on the ground. Engineers of the Air Materiel Command rig a small "extractor" 'chute and a 90-foot ribbon 'chute to the gun. The little one pulls the cargo load backward through the big rear doors of the Packet. Once in the clear, the big 'chute blossoms and the load of more than a ton floats safely to earth.

This method, the AAF has announced, makes possible air-delivery of cargo limited only by the size of the Packet's large rear doors.

The spectacular abilities of the Packet have made it a highly efficient tool in the hands of cooperating Air Forces and Ground Forces.

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Don't Miss the August Issue . . .!

Few are familiar with those early birdmen who fathered aviation in the early 1900's. General of the Army H. H. Arnold is, because he was one of them. Glenn Curtiss held # 1; then-Lt. Arnold had License # 29. Beginning next month, SKYWAYS presents a series of articles about these "first flyers" by now General of the Army Henry H. Arnold.

Where to Fly

(Continued from page 14)

Rangeley Lakes Municipal Airport—*Rangeley Lakes. (Cl. 1)—El. 1810 feet; gravel and sod strips, NW/SE, NE/SW. Obstructions—Trees, NE, SW, NW, SE; Ridge NE; Pole line, SE. No record of service available. Taxi to town 1.6 miles NNW. (Lewiston Chart)*

Portage Seaplane Base—*Portage. El. 60 feet; landing facilities—NW/SE 3 miles. Unsheltered, low dock, mooring and beaching facilities. Obstructions—Hills, W, S, NE. 80 Octane gas, day service. (Aroostook Chart)*

Rangely Seaplane Base—*Rangely Lakes. El. 1518 feet; Landing facilities—wooden ramp, float. Moorings. Aviation fuel, repairs. Located adjacent to town. (Lewiston Chart)*

Tennessee

The Tennessee Valley country is known all over as the "Great Lakes District of the South." Similarly, it is known for its wonderful lake fishing. In the mountain areas, along the Appalachian Trail for example, there are countless streams that offer some of the finest fishing in the nation. In the Great Smoky Mountains alone there are 6,000 miles of trout water. Hunters, too, find Tennessee tops for tramping through the woods for wild game. For those flyers who enjoy "jiss scenery" there is perhaps no more beautiful state than Tennessee with its mountain ranges, its valleys and its Mississippi country. Excellent hotel or cabin accommodations are available at all of the National Park areas within the state. For detailed information and help in planning your trip to Tennessee write Chattanoogans, Inc., Chamber of Commerce Bldg., Chattanooga, Tenn. They can give you price lists for fishing expeditions, lodging places, etc.

American Airlines and Eastern serve Tennessee via Nashville or Chattanooga. PCA runs into Bristol.

Personal Pilot Information:—

Gallatin Field *(Cl. 2)—El. 557 feet. 2 sod and clay strips, N/S, E/W. Rotating beacon* field, lighted wind cone. Obstructions—Trees. *N. E: Bldg. E. No service data available. (Nashville Chart)*

Morristown Airport *(Cl. 1)—El. 1400 feet. Turf strip, ENE/WSW. Wind cone. 73 Octane gas. Private car to town 5.7 miles ENE. (Winston-Salem Chart)*

Cumberland Field—*Nashville (Cl. 2)—El. 400 feet. 2 sod strips, NE/SW, NW/SE. Boundary day markers, wind cone. Obstructions—Hill, N; Transline. NE. Hangars, 80 Octane gas, major repair. Taxi or bus to town 3 miles NNW. (Nashville Chart)*

University of South Airport—*Cowan (Cl. 1)—El. 870 feet. 2 clay and sod strips, NNW/SSE, E/W. L-shaped. Wind cone. Obstructions—Barn. W. Hangar, 80 Octane gas, storage, day service. Taxi to town, 1.8 miles WNW. (Chattanooga Chart)*

(Continued on page 79)

BOOK MART

1.
ELEMENTARY APPLIED AERODYNAMICS by Paul E. Hemke. A text book for those who have already had preliminary training in mathematics, physics, and mechanics. Includes chapter on compressibility; discusses rotors and helicopters. $1.00

2.
SOARING FLIGHT by Terence Horsley. An up-to-date definitive book on motorless flight by an experienced glider pilot. Is well illustrated, and interesting reading for even armchair pilots. $4.00

3.
YOU CAN LEARN TO FLY by Beverly E. Howard and William D. Strohmeier. This is an excellent introduction to flight principles, combined with sound and hearty encouragement to begin taking lessons. Illus. $3.75

4.
THE SOCIAL EFFECTS OF AVIATION by William Fielding Ogburn. This is a very able attempt to foresee the changes that are coming to the world because of aviation. 755 pages, including complete index. $5.00

5.
GAS TURBINES AND JET PROPULSION FOR AIRCRAFT by G. Geoffrey Smith, M.B.E. This improved and enlarged second American edition of the original British work continues to fill a definite need in this country as the only popular book in its field. $5.00

6.
YOUR FUTURE IN AVIATION by J. Fred Henry. If you want a book that will tell you exactly where and how to find the job you want in aviation, this is it. $3.00

7.
PICTORIAL HISTORY OF THE AAF by the Historical Office of the AAF. This is not a history of the AAF in World War II, but a story in pictures, paintings and descriptive captions covering the entire span of military aeronautics in the United States. Over 600 photographs. $10.00

22.
THIS MONTH'S FEATURE:

AIRPORT OPERATION AND MANAGEMENT by Charles A. Zweng. Here is the first comprehensive treatment of airports from a non-engineering standpoint, keyed to postwar conditions. Designed especially to be used as a text for the growing number of courses in Airport Operation and Management now being offered in universities, colleges and aeronautical schools, the book is also full of practical information and suggestions for airport operators and instructors. There are six chapters and 10 appendices, bringing a great deal of useful material within the compass of one 312-page volume. Price: $4.50

8.
GAS MODELS AND ENGINES by Wm. Winter and W. L. Schroder. The only complete and up-to-date book about building and flying gas model planes. $3.00

9.
THE WORLD'S WINGS by Lucien Zacharoff. This book explains the problems and possibilities of global airways. It surveys the international scene, studies the conferences, the plans of great nations to win airways' control. $3.00

10.
AIR TRANSPORT AT WAR by Reginald M. Cleveland. A good account of the important part airlines played in the war, plus tables of statistics of contract operations of the nation's airlines during the war. $3.50

11.
DEVELOPMENT OF THE BRITISH GAS TURBINE JET UNIT. Ten valuable lectures given at the Institution of Mechanical Engineers, London. Only available in American edition. A must for students. $3.00

12.
AIRCRAFT ENGINES OF THE WORLD by Paul H. Wilkinson. A reference book devoted exclusively to aircraft engines. Part I deals with reciprocating engines; Part II with jet propulsion. Contains complete specifications of 104 engines and 20 jets of the U.S., England, Brazil, Spain, Sweden, France, Australia, Switzerland and Russia. $9.00

13.
PRACTICAL AERODYNAMICS by Bradley Jones. This book is your authority on aerodynamics. It has the answer for all questions. No mathematical training higher than elementary algebra is needed to completely understand this book. It is practical for both the beginner and the specialist. $4.00

14.
BASIC AIRPLANE MECHANICS by H. G. Lesly. This book covers the important facts and procedures which the plane mechanic must know to keep planes in working order. Illustrated. $2.75

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16.
BASIC PHYSICS FOR PILOTS AND FLIGHT CREWS by E. J. Knapp. Follows the outline issued by the CAA. The presentation is simple enough to use as a self-study course. The material will be a valuable aid in the meteorology, theory-of-flight, and engine-operation courses required by students. 118 pages. $1.65

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— July, 1947, issue —

Canine Canyon Duster

(*Continued from page 31*)

little terrier in the airplane and Bill wonders if Tags wouldn't jump right out to his death if they encouraged him to make a flying tackle from a *Cub* as they swoop in low for the kill at practically zero altitudes on the snow-clad winter desert ranges.

Flying Hunters

Every year during the fall hunting season when Bill flies deer and elk hunters into the primitive areas, he and Tags always take along a gun and bring home their share of game, too. Tags takes to hunting and fishing almost as eagerly as he does to flying but he always reserves that extra special burst of enthusiasm for airplanes. And when hunting is combined with flying—oh, Brother! The dog fairly pops its buttons.

He has learned to be wary of propellers, but with a reckless flair for the spectacular and breath-taking. China veterans will recall minced coolies who habitually brushed close to the big bombers' and transports' spinning propellers on the theory that the little devils following them wouldn't see the arcs of death and would get chewed up, thus leaving said coolie in a state of peace—a state of peace, that is, until other devils come along to take up with him.

Tags apparently embraces this same shrug-of-the-shoulders philosophy, too, and so far his judgment has been successful—albeit a little on the blood-curdling side.

He has been all over the United States on charter trips with Bill in the Beechcraft, but he mostly likes the mountains. Looking out and *up* at pine trees and rock ledges a few feet beyond the tips of the wings is one sight he never tires of, though it gives most people an hysterical form of dementia praecox.

Tough Field Artists

Just his dish are those airports in the Middle Fork country where you make the approach through winding canyons and never see the field until you chop the power, make a last turn and land—and buy a new airplane if you overshoot because you cannot go around, or farther up. Even that once-you've-used-it-you'll-never-forget-it field where you bounce over a ledge on take-off with enough speed to clear the tail and then dive a heavily loaded airplane toward the river to get the rest of your flying speed fails to daunt this dauntless dog.

Bill says that Tags is such a natural born flyer that he wouldn't hesitate a minute to check him out solo except for one thing, one minor consideration of major proportion—he'd probably bite the first CAA inspector who gave him any trouble and that might lead to his being grounded. "And then," asks Bill, "what would I do for a first-rate reliable copilot who never gets drunk and always wants to fly anywhere, anytime, regardless of weather or anything else?"

Handy Dandy

(*Continued from page 29*)

read in 10 minutes, took a year of careful planning and analysis to prepare. Built like a simple computer, with two revolving disks and a pie-shaped slit to bare the needed regulations, it is simple, sensible, with answers easily located. There is a smaller disk on either side of the master disk, about 6 inches in diameter. A psychological memory prodder is in color; do's are done in green, don'ts in purple. The operation of the disk is so simple it requires no previous preparation. Assume for instance that you want a regulation regarding the contact flight rules in the airport approach zone. All you do is find the words "contact flight rules" on the outer rim of the big disk, then select the words "airport approach zone," move the slit in that direction and read what shows in it. If flight altitude is 700 feet or less, you read on the left of the vertical separation (the disk tells you so), if above 700 feet, you read on the right side. If there are no separation lines the regulation is for flight in all altitudes.

Right o' way

One side of the disk concerns itself with answers to all kinds of situations concerning the right of way and proximity; portable traffic control light signals, and aircraft landings and take-offs. On smaller disk, the disks give you parenthetical information on priority, take-off into the wind, aircraft in distress. The same side of the disk tells you about radio frequencies, airport traffic zones, airways, beacons, fan markers, airway terminal forecast. The other side is given to information on instrument controlled flight plan. The smaller disk subdivides situations into airway control areas, airport approach zone, acrobatic flight, darkness flight, etc. In fact there is hardly a situation in flight or let down that Clothier's gadget has not covered. Because anyone can find the answer to most horny aerial questions quickly with the help of the disk, it is valuable both for newcomer and oldtimer. Any of them will find welcome relief in answers on what to do regarding fuel needs, communication failure, etc., when the old brain refuses to budge. Rules for safe instrument flight are clearly summarized, and the beam characteristics and how to determine quadrants are printed on the disk too.

Clothier began working on the gadget in 1940, and has continually improved it until its copyright this year. A control tower operator at the Davis Monthan Field in Tucson, Arizona, and a former control tower operator instructor, he is emphatic in warning that the disk will not replace a careful study of regulations. It will allow the pilot to fly with a sense of security for he has a handy compact reminder to rely upon—to give him the salient requirements for almost any situation, especially an emergency.

Rather than "rob Peter to pay Paul" a user of Handy Aid in flight should learn to use it without taking too much attention away from his flying.

The Handy Aid merely compresses into a glance a refresher course on the pilot's previous study of the regulations, so he can re-affirm his procedure at a glance and still give his entire attention to doing it safely secure in being right.

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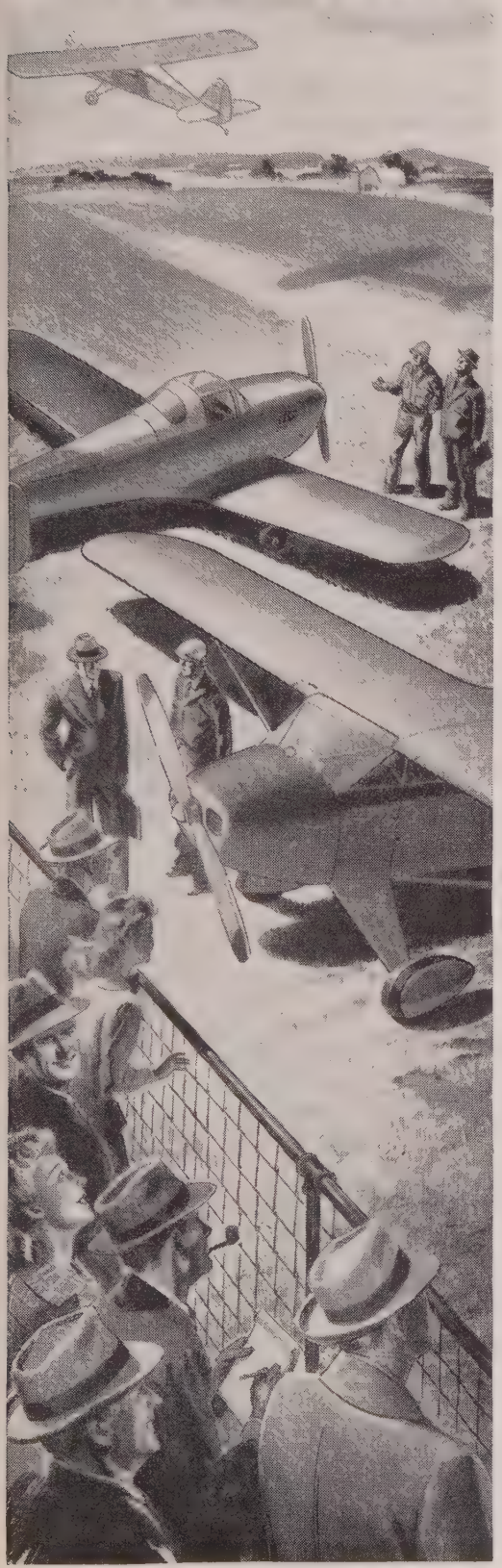

YOU'LL WONDER WHY YOU PUT IT OFF SO LONG

The fellow who just took off in that trim little ship may have been standing where you are now, just a few days ago. But whether he's old or new to flying, he'd surely agree with the thoughts that are going through your mind as you watch him. He'd say that as a mere onlooker, you're missing a large part of life.

Just a few hours' time and a few dollars' investment — practically none of the latter if you're eligible under the GI Bill of Rights — are all that separate you from the boundless new world of his. Why not do as he did: have the Continental Red Seal dealer at your nearest airport show you how quickly, inexpensively and safely you can learn to fly? Sooner or later you're bound to — and when you experience the unforgettable thrill of your first "solo", you'll wonder why you put it off so long.

Thousands who took up flying for sport or recreation are finding that their one-time hobby pays off in utility, too. Farmers, salesmen, business executives — people to whom time is money — use one or another of the several types of specialized personal planes, and, with the rapid spread of airport facilities, derive increasing profit from such use . . . . There's ample time left this season to obtain your private pilot's license and get hours of fun and utility from the plane you buy or rent.

Continental Motors Corporation
AIRCRAFT ENGINE DIVISION — MUSKEGON, MICHIGAN

When you take to the air, a wide selection of personal planes is available. Their variations in speed, range, power and passenger capacity permits the choice of a plane to fit your business or personal requirements. Most of these planes are powered with Continental Red Seal aircraft engines.

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city zone State

I fly a name of plane

I own a name of plane

Dilbert

(Continued from page 44)

judgment and violated contact flight rules in heading back into known bad weather area. Again failed to reverse course as weather became progressively worse.

10. Their final landing was made just one mile from a good airstrip, which was clearly marked on their map.

Let's Look At The Record—The Civil Aeronautics Board has just released the yearly statistical analysis of small-plane accidents. Lack of flying time for this group makes direct comparison with previous years somewhat meaningless. Despite this, however, it contains much of value for pilots.

For one thing, it may surprise you to learn that 31 per cent of all fatal and serious injury accidents occurred during "reckless, low or show-off" flying. This makes it easy to see why the authorities are trying persistently to stamp out this *unnecessary* group of mishaps.

The report also shows that stall-spin accidents are the ones most to be avoided. While they accounted for only 9 per cent of total accidents, more than half of all fatal accidents came under this heading. Since pilot error was given as the cause of all but 3 per cent of these accidents, most of them can be prevented. Remember the three basic flight rules, don't stall, *Don't Stall*, DON'T STALL!

Collisions with other objects were listed as another major cause of accidents. Wires took first place in this category with 41 per cent, while trees came in second with 26 per cent. This doesn't prove there are more wires than trees; they are just harder to see.

The primary cause of all accidents was given as 72 per cent pilot error, under three main headings; technique, judgment, and carelessness. I know this method of accident breakdown is a sore point with many aviators. They contend that instead of heaping everything on the poor pilot year after year, accidents should be listed according to their *underlying* causes, such as inadequate indoctrination or training, inaccurate weather reports, improper cockpit arrangement and plane design, etc.

I'm in sympathy with this viewpoint, because only through knowing these underlying causes can intelligent corrective action be taken. I've even tried to work out such a method of accident analysis. The big catch in such a system, however, is that there is no accurate way of determining basic causes. Pilots would point at everything but themselves, thus so beclouding each and every case that they would have to be settled by Justices of the Supreme Court of the United States.

A more helpful way of analyzing aircraft accidents doubtlessly will be evolved. In the meantime, pilots will have few alibis. They will know that if the investigators decide that an expert pilot could have avoided the accident in question, then it automatically will be listed as due to pilot error.

The one good feature of this method, however, is that it puts it right up to the pilot. It helps to drive home the fact that from the moment he steps into his airplane until it is again secured after flight, he is directly responsible for his own safety, as well as the safety of everyone else on board. Failure fully to grasp the importance of this fact is the *underlying* cause of most accidents.

It Can Happen To You—You are placidly cruising along at 3,500 feet in a light plane and suddenly realize that you have lost 300 rpm. You are slowly losing altitude. It doesn't look as though you could reach the nearest emergency field, 10 miles back. Some cows are grazing in a field ahead. What to do??

When this situation confronted Dilbert, he reacted with characteristic snap and precision. One glance at the cow pasture convinced him that this set up must have been planned especially for him.

Dilbert eased back the throttle when directly over the field at 1,000 feet. He deliberately kept within gliding distance of the field, in case his engine failed completely. The whole thing was so simple that he even hummed a few bars from the latest song hit. He made a perfect, three-point landing just short of mid field. His ego was severely jolted, however, when he ran through a small drainage ditch which sheared off both wheels and one wing tip. Tough luck!

Tough luck, my ankle! As the local inspector pointed out next day, no forced landing was necessary. The engine checked perfectly. All that was wrong was a creeping throttle. The whole thing could have been prevented by a simple twist of the wrist—on the throttle friction control knob.

Knowledge, such as this, will prevent many accidents. Whenever loss of power occurs, make an immediate check of the following:

a. Throttle
b. Fuel Pressure
c. Propeller
d. Mixture Control
e. Blower
f. Carburetor Air

If you are alert and familiar with your cockpit, you can make this check in a few seconds. A correction is often all that is necessary to insure perfect engine operation.

It can happen to you

In Traffic

(*Continued from page 40*)

n flying to one side or the other of the runway, the side you ose will be determined by one of the following factors: 1) Local ng rules; 2) Airport obstructions; 3) Whether traffic is right or hand. If traffic is lefthand, by keeping the runway and the fic pattern on your left, you can keep track of aircraft without king back and forth.

The distance you get from the runway is important too. Don't e very far over. As you look down, the side of your ship should just about beside the runway boundary. Watch for drift so you 't drift back onto the runway.

upposing at precisely the moment you do reach your pattern tude (after a pull up to go around), the runway and a plane t has taken off are on your left. If you bank left to get back into traffic pattern, you might turn into the flight path of the plane ing-off. Though it isn't to the advantage of anything but your k, fly straight ahead. If the pilot on your left is alert, he will n first, but don't try to egg him into it by taking the initiative. ually, he's in the pattern and has the right-of-way. Let him e it. If you must argue, wait 'til you're back on the ground.

Trust the Tower Operator

Another circumstance that may confront you on a light-controlled d is this! If on a final approach with no one waiting to take off no one landing in front of you, the tower gives you a red light, 't decide that 3500-foot paved runway is going to waste and time you take things into your hands. That tower operator may e a good reason for the wave-off—in fact any one of the follow- : 1) A multi-engine charter plane may be lined up behind you; The wind may have changed, necessitating a directional change raffic; 3) Aircraft with radio may be requesting an emergency ding; 4) A plane may be landing toward you—his error but 't help him make a wreck of both of you. In this case trust the in the tower and do as he says.

On a light-controlled field, if you're coming in on the final ap- ach and have received no light from the tower, don't go in and d anyway unless you are certain (1) that you're coming in on correct runway for one thing—on a field with even only *two* ways, the control tower operator still has *four* directions to ch—he can't point the light gun four ways at once; and (2) If *are* coming in on the correct runway (there are very definite ns to tell you this—craft waiting for take-off rather than taxiing to another runway, other planes landing or taking off), and 're certain that when you turned onto the final approach, no er craft was coming in (such as a twin-engine ship on a longer ight-in approach), go ahead and land.

f the sun is in your eyes as you look at the control tower, you not see his light gun at all. One pilot at Atlanta, Georgia, ded despite the fact the tower gave him a red light—and fran- lly—because an airliner was barreling in behind the 65-hp ner plane. The tower operators had the lightplane pilot sent up hem and then proceeded to give him a solemn, sound lecture. insisted he had seen a green light right down to the runway he was a man not given to flights of imagination. They checked the matter for several hours and by the next day had dis- ered that the sun, shining through a water container, had given effect of a green light! Now the water jug wears a canvas cover. long about dusk—if you should ever be caught up after sun- n time and the field is a light-controlled field—the control tower show both red and green lights on it. They light up the corners he control tower roof. Trying to find the light gun in that Aurora ealis is not easy for the novice. You can do it all right, but it es a little concentrating. We know of a pilot who once mistook revolving red beacon atop the control tower for a red light and only thing that brought him in, finally, was a disappearing fuel ply!

n landing behind other aircraft, if the field is not light-controlled, ember not to land too soon behind twin-engine ships, the BT the AT and other high-powered craft. They send a prop wash plays topsy-turvy with your plane. If, for reasons of emergency, have to land close behind a ship with considerable horsepower, to land to one side of it, thereby escaping its prop-wash path. he problem of right-of-way often pokes its proboscis into Mr. eady Confused's

(*Continued on page 80*)

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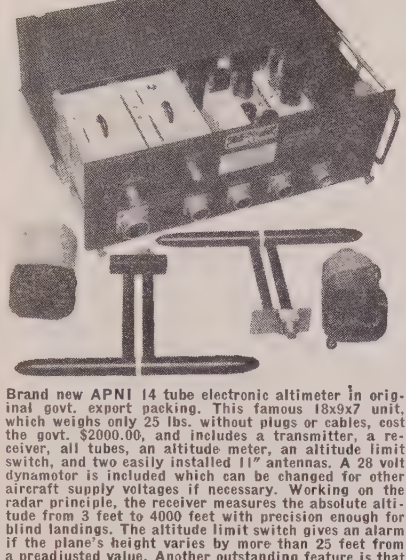

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FIRST FOUR-JET airplane to be photographed in flight is Air Force's XB4

MILITARY AVIATION

Jet Bombers

THE United States has already successfully flown three of its crop of nine high-speed jet-propelled bombers, with three others due to fly this summer. The other three, started later, are due to fly next spring. All will have top speeds in excess of 500 mph, with two or three expected to exceed 600 mph. All are powered with turbojets of the long, slender axial-flow type, with its multi-stage air compressor containing 11 rows of blades which whip up the air to a terrific pressure on its way through to the combustion chambers. The program was begun in late 1944 a few months after the successful bench test run of the General Electric TG-180 (AAF, J-35), and the flight testing of the first two of the radically new type aircraft within less than 30 months is no mean achievement. An important factor in the speed-up of the program was the basic research and design data provided by NACA, which Wright Field made available to the manufacturers. This included new high aspect ratio wings and control surfaces, multi-jet wing nacelles, and internal housing for armament control, communications equipment.

First to fly was the Douglas twin-jet XB-43 which took to the air in May 1946. It appears as though this was more in the nature of a flying test for the TG-180 jet engine in a twin-jet installation, as the XB-43 was actually an adaptation of the XB-42 *Mixmaster*, which had Allison-powered pusher propellers.

North American XB-45 and Consolidated Vultee XB-46 were in a close race as to which would fly first. The 45, delayed for some weeks awaiting delivery of power plant, flew in mid-March 1947, with the 46 following in early April, a somewhat larger, faster ship.

Currently due to fly are the six-jet Boeing XB-47 and Martin XB-48, with the turbine-powered version of the Northrop flying wing (YB-49) soon to follow. The 47 is one of the 600-mph-plus jobs, with sweptback wings and four J-35s in two wing nacelles and one at each wing tip. The 48 is not expected to be as fast, but will possibly be the best performer of the lot at seven miles high. It, too, has moderate sweepback, but no w tip jets (see photo, page 00). There are t J-35s in each wing nacelle, instead of each as in the North American (photo ab and Consolidated Vultee models. The "w will have eight J-35s, with a still la Northrop wing in prospect, to be powere more powerful versions of the North Hendy *Turbodyne*.

Continuing and final success of this bomber program, now ahead of known velopments in any other country, depe very heavily on improvement of the turbojet. Thrust is satisfactory at 4 pounds, but running span is still very below what it should be.

Jet News. . . .

American aircraft gas turbines which h been hitherto mentioned in the techn and general press have been "simple" tu jets or turboprops in the sense that they h used single-stage turbines and single-st centrifugal air compressors (the Gen Electric I-16 and I-40), or single-stage bines and multi-stage axial compressors Westinghouse 19XB and 24C, and Gen Electric TG-180 jet-turbines, and TG- propeller-turbine). The next jet engine which details are likely to be released be the Menasco XJ-37, or L-4000, which developed from the original Lockheed L-1 started in 1941. The Menasco job has b fited from important gas turbine researc both England and this country, as wel some of the advanced German units, includes a centrifugal compressor, axial c pressor and multi-stage turbine (as in Heinkel-Hirth O11), ducted fan (as in Metropolitan Vickers F.3) and after bur (as in the Bristol *Theseus* Mk 21 turb propeller). The XJ-37 is due for bench t any day now, and a static thrust ratin 5,000 pounds is expected (similar to "simple" radial-flow Rolls-Royce *Nene* de Havilland *Ghost*). As designed, a m higher rating may be developed in time, p ably with the accent on "in time." We s have to wait and see. N.F.

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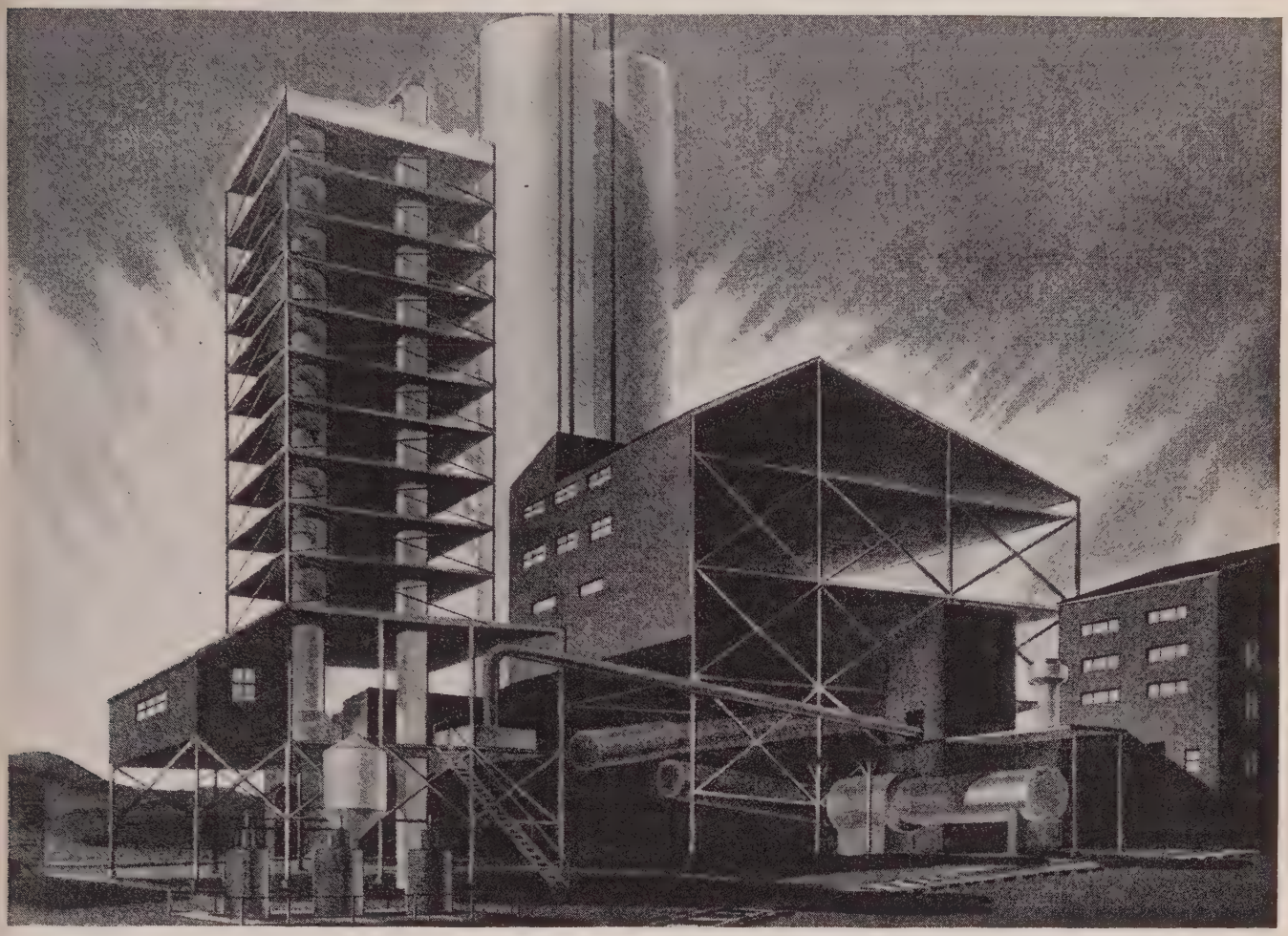

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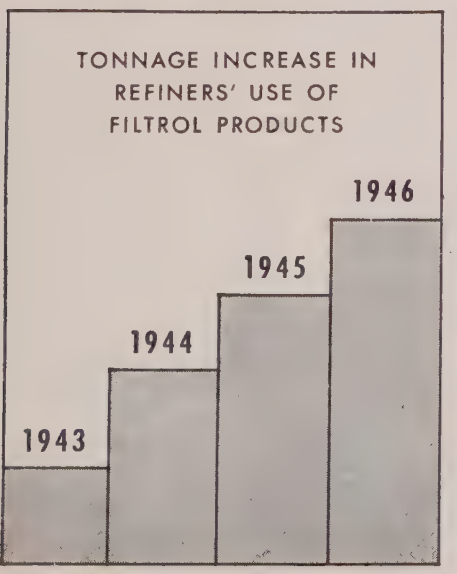

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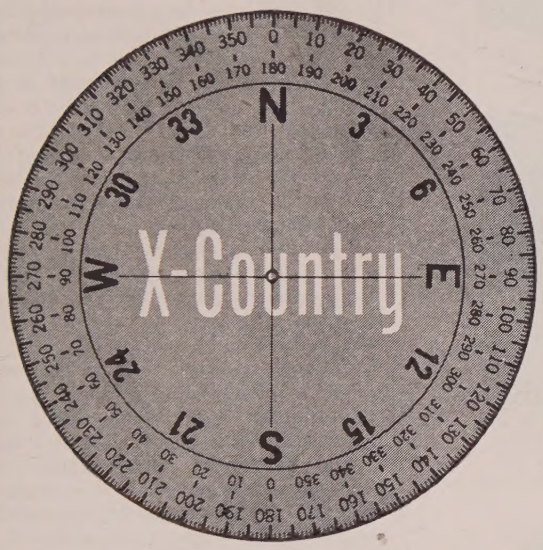
Charleston, W. Va., is probably one of the first cities to offer its businessmen downtown plane service. Harold Taylor operates this seaplane base on the Kanawha River right in the heart of the business district

Grown-ups as well as children are familiar with "Smilin' Jack," a cartoon strip fathered by Artist-Pilot Zack Mosley. Just recently Zack took delivery of a Beech *Bonanza* from Sydney Nesbitt, N. Y. distributor

If you're in Boston and have to get from the downtown area to city's airport in a hurry, you'll probably make trip via helicopter. In daily service, the 'copter takes off from downtown garage, flies to field

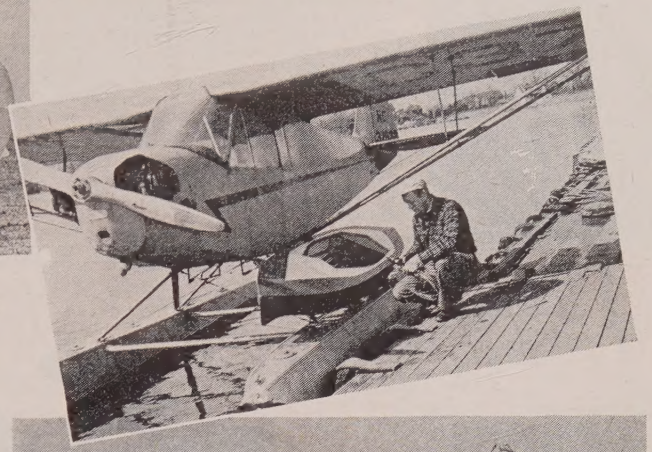
Sikorsky helicopters now are being built in England. Called the Westland-Sikorsky G-AJ00, it is built by Westland Aircraft Ltd., of Yeovil, England, under a license agreement with the U. S.' Sikorsky Aircraft

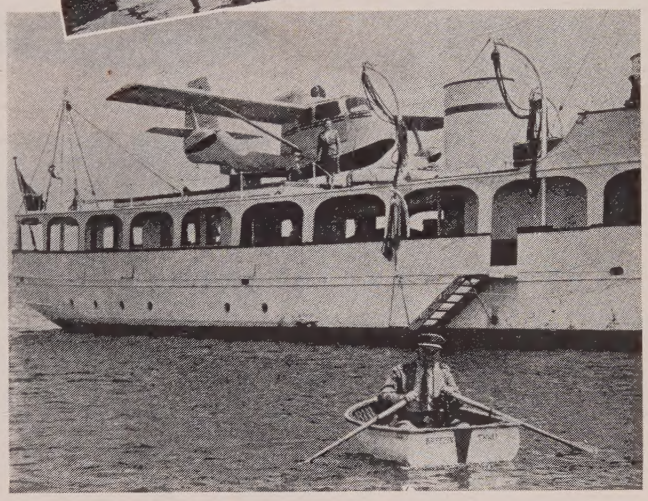
"You don't fly it, you wear it!" reports Dave Binns, flying clown who had this tiny plane made for him. Although powered by only a 90-hp engine, it has speed of over 200 mph. Its wing span is just 19 feet



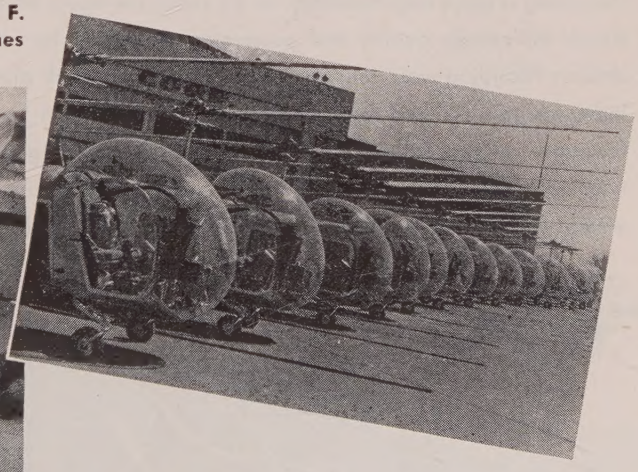
Solo in cement is what they call it at Puente Airport near Los Angeles. When pilot solos, he puts name, date, hand and foot prints in slab of wet cement. Here F. Cullum goes on record while Mgr. Bill Smith watches

Flying sportsmen will welcome idea here offered by George Lambros Jr., seaplane base operator. He lashes a kayak to float struts of one of his J-3 Cubs, then flies it out to good fishing spots in the East





Former hotel man Bearl Sprott wanted to get away from it all, so he bought a war-used patrol boat, equipped it with launching boom, bought a *Seabee*, and sailed for South America for sea as well as air view



Lined up like the chorus at Radio City's Music Hall, these Bell helicopters sit on the apron outside Bell's plant at Niagara Falls. They are destined for the Army (nine of them) and for the Navy (four)

PICTURE CREDITS

COVER—Piper Aircraft's *Skysedan* is engineered for all-metal production. Four place family plane, with 165-hp Continental engine, and 140 mph cruising.

Following list gives source of SKYWAYS' pictures

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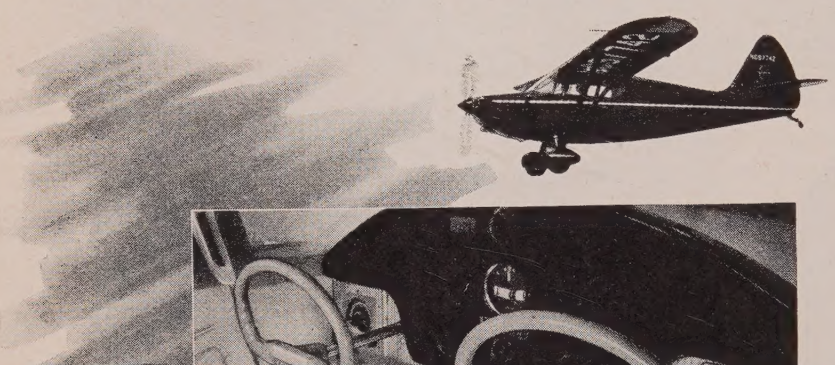

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Electric Bank and Turn Indicator

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Movieland Airport

(*Continued from page 43*)

1927 when Charles Lindbergh was firing th imagination of an earth-bound populace. H owned several planes, successively, and fle for fun while he was in the construction bus ness. But he found he was more interest in flying than building, and sold his busine to go into air traffic control. One of the ear believers in the future of private flying, was fascinated by the traffic problems th would ensue when there was a plane every garage. Drawing on his constructio experience, he began to plan model airport One of his biggest jobs was assisting in Los Angeles County aerial survey of airpo locations. Some of the airports have sin materialized; others are still in Tyler's fil waiting for time and opportunity to develo them.

"Los Angeles needs a dozen more," he sai "Aside from Burbank, Long Beach, Min and a couple of others, all busy, there's n place for a private flyer to go except arour his own field, or on long cross-country hops

Clover Field had first priority in his plan and while Douglas was turning out mo than 7,000 bombers, Tyler planned the pos war field shown in the plan. It is, in effec two airports with a "city" between. The ma runways, now in operation, are tagged fo heavy, multi-engine airplanes, while new run ways on the southeast side of the field ar being built for lightplanes. Ultimately ther will be 10 large hangars and accommoda tions for 900 planes (600 on the field an 300 itinerant), a three-story administratio building, with two or three undergroun parking levels and a helicopter landing dec recreational facilities, restaurants, and th Cloverleaf Flying Country Club.

According to Tyler, "We are going to giv the private flyer a quality of service heretofore unheard of in private aviation. Wit every square inch either paved or landscape and with modern, attractive surrounding we aim to start a new era in aviation."

All traffic on the field is tower controlle and aircraft are required to have functionin two-way radio. Already heavy traffic make this necessary and is in line with Sant Monica's determination that flying from i model airport will be fun and safe.

The city plans to spend one and a ha million dollars on Clover Field which wi be repaid from airport revenue, tie-down gasoline and oil sales. Additional Feder funds are being sought. Few municipal ai ports pay for themselves, but Tyler believe that Clover can do it with ease. Scores operators and aircraft agencies have filed a plications for building space which will available as soon as additional land has bee graded. Those approved will be given lon term leases to construct hangars and sal space in accordance with a general arch tectural plan. Jon Hall's proposed Club h been approved for design, and other buildin will conform to the basic design of it.

More than 50 privately-owned planes a now tied down on the giant Class IV airpo and bulldozers are at work ripping out t weeds and leveling ground for paved parki areas designed to accommodate 600 perm nent tie-downs and 300 over-night transien

An air-minded citizenry and a foresight airport manager are providing Santa Moni with an ultra-modern airport which shou lead the nation.

Where to Fly

(*Continued from page 64*)

Pennsylvania

All flying sportsmen will acknowledge the op o' the list rating Pennsylvania claims. Some of the finest trout fishing in the East s to be had in this state. A letter to the Pennsylvania Board of Fish Comm'rs at Harrisburg, Pa., will bring you details regarding hunting and fishing licenses, locales, etc.

If you're coming in by personal plane, top at Dalesville, 10 miles SE of Scranton. This field is operated by the Davis brothers nd boasts excellent fishing within a 5-minute walking distance of the airport. Another field, at Nicholson, Pennsylvania, also proudly points to hunting, fishing, boating nd swimming within just 4 miles of the irport. Frank J. Mitchell runs the airport nd he says there are good accommodations within a short distance of his field.

As far as lodging accommodations are concerned, plenty are available. Of particular interest to pilots should be Pine Creek Lodge, located just 2 miles east of Gaines, Pennsylvania. Here modern cabins, with private baths, heating stoves, hot and cold water, are available to the flying sportsman at a very reasonable cost. These cabins overlook Pine Creek and its valley several hundred feet below. A good spot to try whether you want to fish, hunt . . . or just sit. There are two airports nearby and the owner of Pine Creek Lodge owns a Stinson *Voyager* which he uses to pick up or deliver guests coming a reasonable distance. Write Pine Creek Lodge for details.

Personal Pilot Information:—

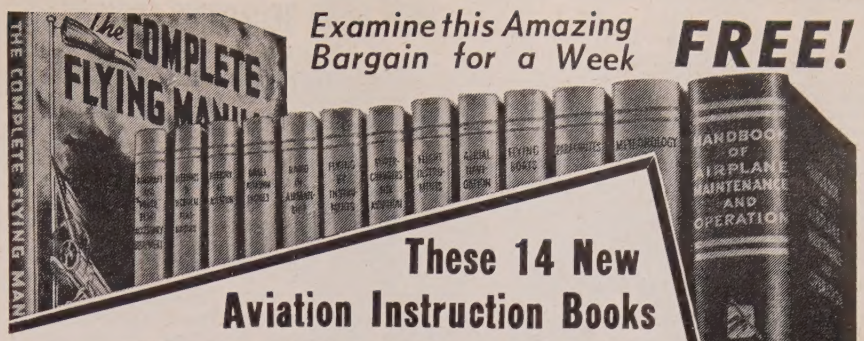
Cherry Springs Airport *(Cl. 1)—El. 2265 feet; 2 sod strips, NW/SE, E/W; L shaped; Boundary day markers, circle on field, wind cone. Obstructions—Trees. NW, SE, W. Hangar, 80 Octane gas, day service. Private car to Corbett 2.4 miles W. (New York Chart)*

Wellsboro Airport—*El. 2000 feet. Under construction, to be opened to personal planes shortly.*

Philadelphia Sky Port—*Located on W shore of Delaware River next to ferries, 0.5 mile S of Philadelphia-Camden bridge. El. 0 feet. Unlimited landing area, floats, moorings. Fuel, repairs, day attendant (Washington Chart)*

Mount View Airport—*Nicholson. (Cl. 1) —El. 1280 feet; 2 earth and sod strips, NW/SE, N/S. Obstructions—Hill, SE; Trees, S. Hangar, tie-down. Mech. available. 0 Octane gasoline. Restaurant and rest room at field. Transportation available to town 6 miles ENE. (New York Chart)*

Daleville Airport—*Daleville. (Cl. 1)—El. 775 feet. 2 all-way strips, NW/SE, NE/SW. Navigational facilities—Boundary day markers, circle on field, wind cone and tee. Obstructions—Hill, SSW, S; Houses, SW; Trees, N; Pole line W. Hangar, tie-down, mechanic. 80 Octane fuel. Bus and car to town. .8 miles N. (New York Chart)*



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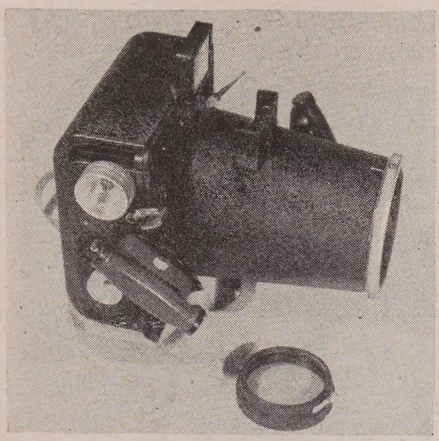
JAN RARIG



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In Traffic

(*Continued from page 69*)

life in a traffic pattern. For instance—if c the base leg you see another plane on h base leg, much further out than you ar you're forced to decide whether or not yc should turn in front of the other pilot's shi onto the final approach. Safety always di tates your decision. Theoretically you ha the right of way provided, after turning in the final approach, your ship is lined up wit the runway and completely turned (banke and level again) before his ship is lined u This is true even if that ship further out a faster trainer—such as the former militai trainer types that frequent traffic patterr these days. But flying is a very real busine so don't take chances with theoretical pra tices . . . do the safest things. Of cour turning onto a final approach in front a multi-engine airplane will be frowne upon by the tower operator. It's easier f you to go around again than run the chan of an aerial mix-up. The only time, or time it is permissible for you to turn onto yo final approach before a ship further out c his base leg, is when you're flying a norm pattern which you *know* to be correct. TI point in bringing this up at all is to let tl beginning pilots know that there are tim when they have the right of way from th base leg onto the final approach. In any i stance, watch Mr. Control Tower for a ligh as he will be watching and will know wheth or not yours is the correct procedure. Yc don't cut anyone out of the final approac if there is ample time and room. And, you haven't cut corners to get there fir you have the right of way.

Some of the student pilot's traffic dilemm is on the ground. With many planes landi and a control tower to watch for the gree light go-ahead signal, the pilot in his 65-I tandem may wonder just which direction "park" his airplane beside the take-c runway. He wants to see the planes comir in and he wants to watch the tower. Whic one shall he take a chance on? The answ is: Neither. Park your plane beside the ru way so that you can see both the tow and the planes coming in. If a landing a craft looks like it might hit your plane up landing, then "git." Hit the throttle, bite t dust, but move away.

An accident occurred recently on a fie that did not have a control tower in oper tion. A Vultee trainer on base leg was flov into the tail of a DC-3 on its final a proach . . . a little more final that the DC pilot deserved. The collision caused an ac dent fatal to all involved (there were airline officials in the DC-3). The Vultee a low wing with excellent visibility. It c only be concluded its pilot did not lo around for other planes in the air, constant *In flying a traffic pattern, put your neck a swivel and leave it there!* (This appli to all flying—don't you forget it.)

Now, a word of caution to you pilots the fast ships. Be extra courteous arou all airports, but particularly those populat with private pilots and student pilots. E member, you had to learn, too, and h much easier it was when your fellow fly gave you the benefit of your inexperience.

Old pilots—help the beginners out. N pilots—show your pilot appreciation by having in the traffic pattern.

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